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THE
PHYSICIAN'S
VADEMECUM;

OR,

A MANUAL OF THE
PRINCIPLES AND PRACTICE OF PHYSIC;

CONTAINING THE

Symptoms, Causes, Diagnosis, Prognosis,

AND

TREATMENT OF DISEASES:

ACCOMPANIED BY

A SELECT COLLECTION OF FORMULÆ,

WITH

A TABLE OF THE DOSES OF ALL MEDICINES NOW IN USE.

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TO
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F.R.S.

PROFESSOR OF THE PRINCIPLES AND PRACTICE OF MEDICINE
IN THE UNIVERSITY OF LONDON; PHYSICIAN TO,
AND LECTURER ON THE PRACTICE OF MEDICINE IN THE ROYAL
HOSPITAL OF ST. THOMAS, ETC. ETC.

THIS MANUAL

OF A SCIENCE WHICH OWES SO MUCH OF ITS RECENT
IMPROVEMENTS TO HIS EXERTIONS,

IS

DEDICATED,

AS A TRIBUTE OF RESPECT TO HIS PROFESSIONAL TALENTS,

AND

IN ADMIRATION OF THE VIRTUES AND INDEPENDENCE
WHICH ADORN HIS CHARACTER,

BY

THE EDITOR.

AUTHOR'S PREFACE.

THE following concise account of the several diseases that fall under the province of the Physician was committed to the press, with the hope of its proving useful to students, and those practitioners in medicine who, from their professional occupations, or other circumstances, may not have it in their power to consult the more voluminous works that have contributed so much to the improvement of medicine.

The very extensive sale of the work, and its having been translated into most of the continental languages, induce the Author to believe that his labours have been generally approved.

It has been his object to compress, within a smaller compass than has hitherto been done, consistently with utility, every thing which more especially deserves attention with a view to the treatment of diseases. In pursuing this design, he has discarded all theory, and retained only those leading facts with which it is absolutely necessary for a practitioner to be acquainted when he approaches the bedside of his patient.

Under distinct heads are arranged,

1. The characteristic symptoms by which diseases are known.
2. The causes from which they most frequently have their origin.
3. The circumstances that more especially point out the difference between diseases which resemble one another.
4. The signs which influence the judgment in forming a prognosis of their event.
5. That mode of treatment, which, in the present improved state of medicine, is deemed most appropriate, and which experience has sanctioned.

The select collection of Formulæ, Glossary of Terms*, and the Table showing the Doses of all valuable medicines he employed, will, the Author trusts, combine to render the volume more extensively useful.

Saville-row, August, 1823.

* The Glossary of Terms has been omitted in this edition, and its place supplied by a Table of the Names and Doses of all Remedies in the British and foreign Pharmacopœiæ.—ED.

EDITOR'S PREFACE.

THE Editor of this edition has prefixed to the original work an epitome of the latest views on the principles or institutions of medicine; by which he is induced to hope he has considerably enhanced its value. He has devoted the first sixty-four pages to the subject, and introduced the most important and recent opinions on **PHYSIOLOGY, PATHOLOGY, and THERAPEUTICS.** He has given a fuller description of semeiotics, or signs of diseases, than will be found in any work of this size hitherto published, or in any of the elementary treatises on the practice of physic which are in the hands of students. In this article are comprised the normal and abnormal indications of every organ, and of every physiological system in the human body. The matter that claims peculiar attention are the phenomena and morbid signs afforded by the heart in health and disease; in which are the latest conclusions of the illustrious Laennec, and of the most eminent of his successors, Dr. Corrigan, Dr. Haycraft, Dr. Graves, and Dr. Hope. The history of the pulse has been considered an integral part of the functions of the circulatory system, and therefore has been appended to it, and is the only succinct reference offered to students in our language.

The next addition of importance is the introduction of M. Laennec's last description of the phenomena and morbid indications discoverable by auscultation, together with the modifications made by Dr. Forbes, Dr. C. Williams, Dr. William

Stokes, Dr. Townsend, and Dr. Hope; and also the signs furnished by percussion, succussion, and mensuration. The indications deduced from the cerebro-spinal system, including the intellectual faculties; from the digestive system, the secretory system, the locomotive system, and the genito-urinary or genital system will, it is supposed, supply much valuable information to those commencing the study and practice of medicine.

The succeeding section on general therapeutics, and especially on the actions of medicines upon the living body, has been compiled from the best works on the subject, especially those of M. Barbier, Dr. Spillan, and Dr. A. T. Thomson, and will be perused with advantage by the junior members of the profession. The articles on Synochus, Intermittent Fevers, Typhus, and the Exanthematous Diseases, have been modified according to the most recent opinions; while that on Phrenitis, or Cerebritis, has been almost remodelled; and those on Meningitis, Arachnitis, Diseases of the Heart, Carditis, Pericarditis, Peritonitis, Pathology of Apoplexy and Paralysis, Vaccina, Cholera Epidemica, and Pleurodynia, are editorial productions. The pathology of numerous diseases is also appended.

All new medicines of undoubted value have been introduced; among these are the chlorides of soda and lime, Lugol's preparations of iodine; ilicina, salacina, piperina, strychnina, and quinina, with appropriate formulæ for their exhibition.

A Table, showing the doses of the most efficient medicines in the British and foreign Pharmacopœiæ, has been substituted for one which exhibited the modern and ancient names of drugs; as this will be extremely convenient to those engaged in practice. The editorial additions throughout the work, with the exception of the first page, which was

inadvertently omitted, have been placed in brackets, excepting also a few verbal alterations; and for these the editor, and not the learned and distinguished author, is of course responsible.

The unprecedented success of Dr. Hooper's Physician's Vademecum, upwards of 20,000 copies of it having been disposed of in a few years, acted as a powerful incentive to the editor to use his best exertions in collating the numerous facts and discoveries which the rapid progress of medicine has elicited since the last edition of the work was published, being a period of nearly ten years. He may, perhaps, take leave to observe, that he has employed great care and caution in introducing new remedies; for he is one of those who hesitates to adopt indiscriminately all new doctrines and remedies until he has tested their value by personal observation.

London, December 15, 1832.

THE PHYSICIAN'S VADEMECUM.

INSTITUTIONS OR PRINCIPLES OF MEDICINE.

THE Universities and Medical Schools of all civilized nations have wisely ordained, that the student of medicine should acquire a correct knowledge of the principles, before he commences the study of the practice of the healing art; and, in accordance with this view, it is deemed right to prefix a concise description of them to a Manual of the Practice of Medicine. These principles are not to be found in a concise form in any English work, and are only to be learned in Universities long-established. It is impossible to describe them fully in a production of this kind; but an imperfect description is better than no description at all. It is an axiom in medicine, that correct theory, or sound principles, are indispensably necessary for the foundation of judicious and successful practice. Every one acquainted with the sanative art will admit the validity of this conclusion. If the practice of medicine, as is very generally and erroneously supposed, consisted in the application of a few certain remedies for the alleviation or removal of diseases, a knowledge of it would be easily acquired; but all the initiated have discovered that its empire is boundless, and that no other science is so important or so valuable to mankind. It comprises almost all the branches of natural science, besides those strictly called medical, in which we find a mass of information collected

which few can hope to possess. But the possession of the elementary principles of all the medical sciences is justly expected and required. In proof of our position, we may state that the history of medicine informs us, that the most renowned and venerated teachers grew old in the study of a single branch of our science, without having fully explored it. Hippocrates, who did more for medicine than any one of his successors, honestly declared, "that he had arrived at the end of life, but not at the end of physic." The truth of his assertion is manifest; for to learn all that is known in all the branches of medical education is impossible in the very nature of things; but to become acquainted with their Outlines or Elements is in every man's power. Medical practitioners are therefore compelled to acquire a proper knowledge of the facts and principles on which their art is founded, so as to justify the proper authorities in placing their names among those who may without injury to society, become responsible for the lives and happiness of their fellow-creatures. In order to promote this laudable object, to facilitate the progress of the student, and to remind the practitioner of correct principles, this epitome of the Science and Practice of Medicine has been compiled.

The study of the Functions of the Living Economy, or Organism, should naturally precede the study of the derangements and changes to which it is liable. The functions of the human body are eleven in number:—1, Innervation; 2, Circulation; 3, Respiration; 4, Digestion; 5, Absorption; 6, Nutrition; 7, Secretion; 8, Sensation; 9, Intellectual Combination; 10, Action of Expression; and 11, Generation. These functions are divided into four classes:—1, *Vital*; innervation, circulation, respiration; 2, *Nutritive*; digestion, absorption, nutrition, secretion; 3, of *Relation*; sensations, intellectual combinations, actions of expression; 4, *Genital*; generation.

The functions of relation require especial notice, as they are often neglected. They are divided into three principal orders:—1, of *impressions*; 2, of *intellectual combination*; and 3, of *expression*.

1. *Functions of Impression.*—Modifications determined in the nervous system, whence result *sensations*, and these are divided into *general* and *special*.

General Sensations are effected indistinctly by all agents of excitation, and received by all organs on account of their nervous connexion with the brain.

The external impressions directly affect the brain, and cause *elements of ideas*; and the *internal impressions* are indirectly conveyed to the encephalic nervous system by the ganglionic nervous system, and cause *elements of passions*, a distinction that reflects the greatest light on the philosophic history of moral man.

Special Sensations.—These depend on certain organs, and are divided into five varieties:—1, *Palpation* intermediary between general and special sensations; 2, *Gustation*; 3, *Olfaction*; 4, *Audition*; and 5, *Vision*.

2. *Functions of the Intellectual Combinations.*—These comprise the *intellectual faculties*, and the *passions*. Under this head are also considered the reciprocal influences of *instinct* and *reason*, with the *physical* and *moral constitution* of man.

The *physical constitution* embraces *temperaments*, or the predominance of a certain order of apparatus, and these are divided into *nervous*, encephalic and ganglionic, *lymphatic*, *sanguine*, *muscular*, *bilious*, and *melancholic*.

The *moral constitution* refers to character, and depends upon the predominance of a certain order of intellectual faculties or passions, and of this we have the following varieties:—1, *curious*; 2, *indifferent*; 3, *voluntary*; 4, *indecisive*; 5, *reasonable*; 6, *maniacal*; 7, *philanthropic*; 8, *egotistic*.

3. *Functions of Expression.*—It is by the actions of expression that the *exterior* man can perceive the *interior*; or that we distinguish the *moral* from the *physical* man. The doctrines of Lavater and Gall were intended to reduce this study to great simplicity.

Generation.—This function presents six phenomena:—1, *preparatory excitation*; 2, *copulation*; 3, *fecundation*; 4, *gestation*; 5, *parturition*; and 6, *lactation*.

The last part of physiology comprises four divisions:—1, the *History of Life*; 2, *Considerations on Death*; 3, *Chemical Decomposition of the Organism*; 4, *Natural Theory of the Human Race*.

The *History of Life* is divided into six epochs:—1, foetal life; 2, infancy; dentition; 3, adolescence; boyhood, girlhood; puberty, menstruation; 4, virility, manhood; 5, old age; 6, cadueity; longevity.

General Considerations on Death.—Natural death, its causes, accidental or sudden, effects on the heart, lungs, and brain; signs of death, illusory, probable, certain; application to legal medicine. Lastly, we are to include the natural theory of the human race.

Such is the immense scope of physiology; but in the institutions or principles of medicine we have still a much larger field to cultivate. Let us now proceed to consider them.

For some centuries past, the Principles or Institutions, and the Practice of Medicine have comprised the study of the following sciences:—

1. Anatomy, which teaches a knowledge of the infinity of parts that compose the human body, in its normal or natural condition. This science is the fundamental basis of medicine. It would be impossible to form an accurate idea of an organ in disease, unless we knew its healthy appearance. Deprived of this salutary light, the medical practitioner could not treat diseases with the least success. By it, he learns the most admirable and wise co-ordination, the concatenation, and respective relations of the numerous organs to which is confided the mysterious exercise of life. Among these he finds nothing defective, nothing superfluous; since the most imperceptible as well as the largest organ fulfils, in the mechanism of life, a function important and essential to the maintenance of the whole. Nothing is more capable of elevating the mind towards the Sublime Architect of the Universe than the consummate perfection we discover and admire in his principal work—the construction of man.

2. Physiology, is the science of the functions or actions, or

uses performed by the organs in the living body, such as the circulation of the blood, sensation, digestion, respiration, vision, audition, gustation, olfaction, &c. What can be more interesting to our study and reflection than these functions, and more especially the intimate connexion between the intelligent principle and substance purely material, or, in other words, between mind and matter.

3. Pathology is the science of the nature of diseases or disorders of functions. It is divided into Nosology, Etiology, Symptomatology, and Semeiology or Semeotics.

4. Therapeutics, or the science of preventing or treating disorders and diseases. This comprises Hygiene, Materia Medica, and Botany, Pharmacy, Chemistry, Surgery, and Obstetricy.

The study of State Medicine with Medical Jurisprudence is also required.

The study of each of these branches is imperiously necessary to the medical practitioner; and no man, however ingenious or talented, can practise medicine, including all its branches, with satisfaction to himself or safety to the public, without a competent knowledge of the elements of all the above sciences.

Medicine is now defined the art of preventing and treating diseases; but formerly it was called the art of preserving health and curing diseases. The word cure is not used at present, because we possess no remedy capable of effecting an immediate cure. There is a great difference between treatment and cure, as many diseases are incurable, but still are proper subjects of treatment.

The institutions or principles of medicine are divided into three branches:—

The first treats of life and health.

The second embraces the general doctrine of diseases.

The third comprises the general doctrine relative to the means of preventing and treating diseases.

These three divisions are included in Physiology, Pathology, and Therapeutics.

PHYSIOLOGY, OR THE STUDY OF THE FUNCTIONS AND ACTIONS
WHICH CHARACTERISE LIFE.

The study of the functions of the mind and body in health is termed Physiology, or the doctrine of the Animal Economy; and this is the only sure foundation on which scientific practice can be raised.

The Functions of the Animal Economy, or uses or actions of the different organs of the body, are so various and complicated, that they form a kind of circle, at any point of which we may commence our investigations. All these are manifestations of life, and all are indispensable to the health of man. It is extremely difficult to determine the proper order in which they are to be described: some illustrious physiologists commencing with the Nervous Power and Energy, now termed Innervation; others with the circulation of the blood, more with Digestion, Respiration, &c. The definition of diseases proves at once the importance of Physiology: all consist in the disorders or derangements, or alterations in organs, and consequently of the functions which they are destined to perform. We cannot restore diseased parts to their normal condition, if we are ignorant of that state.

The vital Properties or Functions of the Animal Economy are divided into six: *Sensibility, Contractility, Caloricity, Expansibility, Sympathy, and Synergy.*

1. *Sensibility* is that power which living parts possess of receiving impressions from the different bodies with which they are placed in contact. There are two modifications of it, the *organic* or *latent*, and the *moral*.

The one is not subservient to volition, and is common to all living beings; the other is the attribute of thinking beings. The first is illustrated by the functions of the organs which are performed independently of the mind, as circulation of the blood, glandular secretion, &c. The second is that of which the intellect is cognizant; as vision, olfaction, gustation, audition, and touch. It is that which enables us to perceive the sensations of hunger and thirst, pleasure and pain; in fact, all the sensations of which the soul is capable.

2. *Contractility* is that function which enables living beings to perform their motions. It is also divided into *organic* and *moral*. The first is exemplified in the interior motions of organs which are performed without our knowledge, as the secretion of the glands, the action of the lymphatics, &c. The second is that of which the soul acquires a knowledge. It is subdivided into *voluntary* and *involuntary*; the first consists in those movements under the influence of volition, as walking, dancing, &c., the second are performed with our cognizance, but without our ability to accelerate or suppress them; as the action of the heart, kidneys, &c.

3. *Caloricity* is that faculty which organs possess of preparing a quantity of heat necessary to life; and of maintaining the temperature of the body in all situations, whether hot or cold. This is as indispensable to life as air is to respiration; it penetrates, warms, dilates, expands the organs, facilitates the circulation of the fluids, and, in a word, it animates all parts, and without it life ceases. When it is in excess, it irritates, inflames, and disorganizes all living tissues. The temperature of the human body is 98° of Fahrenheit, and this does not vary in the coldest or warmest climate. The quantity of caloric necessary to existence is modified by habitation, aliment, drink, clothing, &c.

4. *Expansibility* is the faculty which enables organs to expand or dilate themselves for the admission of certain substances necessary for their growth, their preservation, and the exercise of their functions. Deglutition, respiration, dilatation of the heart, &c. illustrate this faculty.

5. *Sympathy* is that faculty by which organs almost simultaneously perceive the impressions of others, either contiguous or remote. This arises from the universal nervous connexion which subsists in all parts of the body, through the cerebro-spinal system. It would be easy to illustrate this faculty by thousands of examples; a few shall suffice. Thus the sight of agreeable food will excite the salivary glands, as will also its odour; the sight or odour of a disagreeable object will cause headache, nausea, vomiting, or fainting; disease of one eye will affect the other, a diseased tooth will cause pain

in different parts of the face, ear, eye, head; it will prevent sleep, derange the appetite, and in an infant will induce diarrhœa; disorders of the stomach will derange the liver, lungs, heart, brain, kidneys, uterus; in short, every part of the body. A knowledge of the cause of sympathy enables us to account for most of the symptoms of disease.

6. *Synergy* is the action of every organ directed to one end. Thus we observe a series of functions employed in the digestive process; as mastication, deglutition, chymification, chyfication, and absorption. Such are the vital properties; but Life itself cannot be located or described.

Functions in General.

Function is defined the action or use of an organ or a series of organs, as that of the lungs in respiration, that of the liver in secreting of bile, that of the kidney in secreting urine, &c. Functions are subdivided into *organic* and *intellectual*, each having a reciprocal action upon the other. This arises from the intimate connexion between the material and immaterial endowments of our being. Every one knows the influence of the mind and the passions over the corporeal organs in health and disease.

The *Intellectual Functions* are comprehended in the term *Psychology*, and their operations are ten—sensation, attention, perception, memory, imagination, analysis, association of ideas, comparison, judgment, and reason. The concurrent action of these with those of the organic functions causes our wants, affections, and intelligence. The natural cares of man are, the conservation of his health and the propagation of his species; the natural affections, self-love, love of the Supreme Being, and of all that contributes to his happiness: and, on the contrary, a hatred of all things that diminishes this happiness. The natural intelligence arising from the light of reason endows him with power to distinguish good, evil, the existence of a Sovereign Being, and the immortality of the soul.

The passions may be either morbid or therapeutic agents.

Functions purely organic.—The organic functions are, the

external sensitive, the internal sensitive, the locomotive, the vocal, the masculine and feminine reproductive, the digestive, the chyloferous absorbent, the circulatory, the respiratory, the exhalant, the secretory, and the general absorbent.

The eye, ear, nose, palate, and skin, with their appendages, form the *external sensitive* apparatus. The brain, spinal marrow, and their numerous nerves, with the great sympathetic, constitute the *internal sensitive* apparatus. The bones, muscles, tendons, and ligaments, compose the *locomotive* apparatus. The larynx and its appendages form the *vocal* apparatus. The testes, penis, &c., constitute the *masculine genital* apparatus. The vagina, uterus, ovaries, &c., compose the *feminine genital* apparatus. The mouth, salivary glands, stomach, intestines, liver, pancreas, &c., form the *digestive* apparatus. The numerous absorbent vessels placed on the surface of the stomach and intestines constitute the *chyloferous* apparatus. The heart, arteries, veins, and capillary vessels compose the *circulatory* apparatus. The parietes of the chest, the trachea, diaphragm, bronchi, and lungs, constitute the *respiratory* apparatus. The perspiring vessels compose the *exhalent* apparatus, the glands the *secretory*, and the lymphatics the *absorbent* apparatus.

The order in which these functions are considered is indicated by nature. It has been already stated that there are two sensitive centres which preside over the functions of the economy, the cerebral system, and that of the great sympathetic nerve. The first influences all the organs destined to place man in relation with the different objects of nature; the second governs the functions of the internal organs independent of the will: the first affects life, the second internal life or nutrition.

The functions which place man in relation to all beings to which he is exposed, are:—1, *external* sensations which make him perceive the qualities and properties of all bodies with which he comes in contact; 2, *internal* sensations, in virtue of which he *perceives* and meditates the impressions transmitted to the brain by the senses; 3. *locomotion*, which enables him to seek and enjoy the different sensations,

agreeable or disagreeable ; 4, the *voice* and *speech*, by which sensations and thoughts are communicated ; 5, *generation*, or the function by which the sexes, after the age of puberty, enjoy the faculty of procreating and perpetuating the species.

The *internal* functions, or those of nutrition, are :—1, *digestion*, by which the various aliments are changed into chyle, or the source of nutriment or strength ; 2, *chyliferous absorption*, by which the chyle or nutritive portion of the aliment is conveyed to the heart ; 3, *circulation of the blood*, by which the chyle is conveyed to the lungs, and there transformed into blood, whence it returns to the heart, and is sent through the arteries to every part of the body, and returned by the veins to the heart, to be again vivified and augmented by the addition of chyle and the function of respiration, and is again circulated through the body ; 4, *respiration*, by which the chyle is converted into blood by the action of the atmospheric air upon it and the blood ; 5, *exhalation*, or the deposition of certain principles of the blood on the surface and interior of organs ; 6, *nutrition*, or the transformation of blood into the substance of organs ; 7, *general absorption*, or the function of the lymphatics, by which they take up from the surface and tissue of all the organs certain fluids, which they convey into the circulation ; 8, *calorification*, or the formation of the heat necessary for the proper performance of functions and the sustenance of life.

It is impossible to describe each of these functions in a work of this kind ; an accurate account of all of them will be found in the systems of physiology ; and for the same reason other points must be omitted, as the different ages of man, the temperaments, constitutions, habits, idiosyncrasies, or peculiarities of constitutions, death, putrefaction of the human species, and the natural theory of the varieties of mankind.

PATHIOLOGY, OR DOCTRINE OF DISEASES.

The word *Pathology* means a discourse or a history of diseases. According as one or several organs or functions are deranged, *Pathology* is divided into *special* or *general*.

General Pathology.—The life of man is divided by most writers into four different states—health, immence, disease, and convalescence. *Health* is defined the free, easy, and regular performance of all the functions. *Disease* consists in a derangement in the position, structure, or vitality of one or many organs, and consequently in the function or functions of organs. *Immence* is applied to slight indisposition, which may terminate immediately in health or disease. *Convalescence* is that period which extends from the time of cure to the complete establishment of health.

We consider diseases in general under the relation of their *causes*, their *invasion*, their *progress*, their *terminations*, their *symptoms*, their *signs*, their *classification*, and their *treatment*.

ETIOLOGY, OR CAUSES OF DISEASES.

The causes of diseases are all those circumstances capable of deranging the health. These are divided into *internal* and *external*, according as they exist in the body itself, or originate from the innumerable agents that surround it.

The causes of disease are subdivided into the *remote* and *proximate*; and into the *occasional* or *exciting*; and the *predisposing*.

Causes are called *remote* when there is an interval between the time of their application and that at which the disease is produced: thus exposure to cold may produce pneumonia or fever at a longer or shorter interval, and cold is called the remote cause of the disease.

The *occasional* or *exciting* cause is applied to that which induces a morbid state. The ingestion of improper aliment will excite nausea or vomiting; but the cause, though exciting, is remote, when compared to the proximate, or that which induces the condition of the stomach during vomiting.

The *proximate* cause is intended to mean the exact condition of an organ when its function or structure is diseased; or in other words, it is the disease itself. Many eminent writers among the moderns object to the term proximate cause, but many others adopt it.

The *predisposing* cause is a certain condition of the body

which renders it liable to be affected by remote or occasional causes. For example, an individual may at one time be exposed to the influence of cold without any injurious effect, but at another time it will induce fever or inflammation. Now the cause being the same on both occasions, there must be something peculiar in the body, that exposed it to be affected at one time and not at another. This state is called *predisposition*, without whose existence in many cases the causes of diseases do not operate. But violent causes may act without this predisposition. The application of intense heat will cause a burn without predisposition; but the effects of the injury will be considerably modified by the state of health of the sufferer. A man whose health is injured is much more predisposed to diseases of various kinds than one whose health is good.

Invasion of Diseases.—This term is applied to the absolute appearance of disease consequent to the action of one or many causes. The attack may be slow or sudden, or may be preceded by certain symptoms, as derangement of the physical or intellectual powers previous to the commencement of fever. Some have applied the term *incubation* to the time that elapses from the slightest derangement to that of the development of the disease.

Progress of Diseases.—We consider diseases in relation to their duration, periods, and types. As to their duration, they are divided into *acute* and *chronic*, the one class proceeds rapidly, the other slowly.

The *periods* of disease are applied to their stages, and are six; 1, the prelude; 2, the invasion; 3, the augmentation; 4, the middle; 5, the disease; and 6, the termination.

Type or Form of Disease is used to express the order in which the symptoms appear and succeed. Under this head diseases are divided into *continued*, *intermittent*, and *remittent*. The *continued* diseases are those which run their course without any interruption in their symptoms; the *intermittent* are called periodical, or those whose course is interrupted by intervals of health; and the *remittent* are those which have an alternate diminution and an augmentation in their symptoms.

SYMPTOMATOLOGY, OR SYMPTOMS OF DISEASES.

The term *symptom* is applied to every alteration of organs, functions, and fluids which is appreciable by the senses, and which attests the existence of some disorder or disease. Symptoms are divided into *local* and *general*, *proper* and *common*, *primitive* and *consecutive*. The local symptoms are those which exist in a diseased part, as pain, heat, redness; the general are those which extend from the diseased part to the principal organs or functions of the economy. Thus the disease called whitlow will not only cause intense pain in the finger, but in the arm, and will finally produce loss of sleep, want of appetite, and considerable constitutional disturbance.

The *proper* symptoms are those peculiar to certain diseases, as dilatation of the pupil in compression of the brain; while the *common* symptoms are present in a variety of diseases, as dejection of mind, loss of appetite, &c.

The *primary* or *primitive* symptoms are those that occur in a short time after the application of the morbid causes, as the appearance of small-pox soon after inoculation, or the appearance of a chancre or gonorrhoea soon after exposure to the causes; while the *consecutive* symptoms, as the fever and maturation of small-pox, or bubo, eruption, or stricture in the other cases, do not occur for a long time after the commencement of the disease.

SEMEIOTICS, OR SIGNS OF DISEASES.

Medical Phenomenology.—Every phenomenon, that is to say, every organic action and alteration, and every derangement of function, and every change of fluid, is a *sign* of disease. Signs are relative to the past, present, or the future. These are called *commemorative* when they refer to the history of the disease, and *diagnostic* when they refer to the actual state of the malady; and are divided into *certain*, *equivocal*, and *uncertain*.

In detecting diseases, we must carefully examine all the regions of the body, and every organ and function in par-

ticular. This examination is accomplished by the aid of the senses, of vision, hearing, touch, taste, smell, and by the use of certain instruments. Our primary object is to discover whether the disease be merely a disorder of function, or a lesion of structure; whether it be purely nervous, or dependent on increased vascular action, arising from congestion, inflammation, or the consequences of this last. It is of the utmost importance to determine the nature of the disease; for if functional, the treatment will be totally different from that requisite for structural, and *vice versa*. In many instances we cannot form a correct diagnosis; in many it is impossible; and in several cases we have to treat combinations of both species of disease as the same, a complication which forms decidedly the most difficult part of the practice of medicine.

1. *Signs or Morbid Indications afforded by the Senses.*—A brilliant sparkling eye indicates disease in the brain either idiopathic or symptomatic. When the eye is dull, disturbed, haggard, or expresses fury or fright, it is an unfavourable sign, and often announces the approach of death.

Deafness in acute diseases indicates serious disease in the brain or ear.

Loss of smell and taste are presumptive signs of more or less irritation in the stomach.

Loss of touch announces disease of the brain, and of the prostration of the vital powers.

2. *Signs or Morbid Indications afforded by the Moral Condition.*—The full and entire use of reason, serenity of mind, courage, hope, and gaiety, are favourable in disease. But patients may present all these signs to the last hour, and nevertheless die suddenly.

The exaltation of the intellectual faculties, or the sudden augmentation of the memory, judgment, powers of reasoning and imagination, in severe diseases, is almost always a certain indication of a last effort of nature against death, to which fatal sinking very speedily succeeds.

Derangement of reason or delirium, restlessness, sinking, sadness, and despair, denote serious diseases.

Pain never exists without a cause; and it indicates some

morbid condition in the part in which it is situated. The character of the pain will furnish an exact diagnosis of the nature of the disease, and consequently of the means to be employed for its removal. We distinguish seven kinds of pain, 1, *tensive*; 2, *pulsative*; 3, *lancinating*; 4, *pungent*; 5, *burning*; 6, *piercing*; 7, *dull, heavy, or gravative*.

1. *Tensive pain* is accompanied by a sensation of distention, such as that of an abscess.

2. *Pulsative* is accompanied by a sensation of throbbing more or less violent, as in the formation of an abscess in different organs.

3. *Lancinating* affords a sensation as if a sharp instrument were suddenly driven into a living part, as in rheumatism.

4. *Pungent* resembles that of a puncture, as in pleurisy.

5. *Piercing or boring* is compared to the effect of an auger passed into a living part, as in the pain in the head called *clavis hystericus*.

6. *Dull, heavy, or gravative pain* is attended with a sense of weight, as in dropsies.

Signs or Morbid Indications afforded by the Movements.—The immobility, inertness, and the stupor of the sick, convulsions, contractions, and relaxations of the muscles, spasms, and contractions of organs, startings and projections of the tendons, especially of the wrist, are signs of violent inflammation in the brain or stomach.

Carphology, or the movement which the sick make in searching for, or grasping at imaginary objects, is regarded as a sign immediately preceding death. Convulsive agitations of the different muscles of the face, the sinking of the features, the *facies tetanica*, or spasms of the muscles which support the eyelids, the *alae nasi*, superior lip and lower jaw, sharpened features, or the *facies hippocratica*, indicate a great alteration in the brain or digestive organs.

Signs or Morbid Indications afforded by Sleep.—An agreeable sound sleep is a favourable sign; but when it is disturbed by sudden startings and sad and frightful dreams, it indicates some serious internal disease. Insomnia, or want of sleep,

denotes irritation of the cerebral system. Somnolence indicates congestion, inflammation, or effusion into the brain.

Signs or Morbid Indications afforded by the Cutaneous Surface.—Of all parts of the body, the external surface affords us the best indications of disorder or disease. There is scarcely a fatal disorder or disease which we cannot detect by the appearance of the physiognomy, and by the external habitude of the body. We discover cerebral congestion by redness or lividity of the face, lips, or cheeks; hectic by the red patch over the malar bone or the cheek; jaundice and disease of the liver by the yellowness of the eye or face; anemia by pallidity of the face, lips, and tongue; chronic, liver, or abdominal disease by the greenish yellow tinge and reticulated appearance of the blood-vessels of the face; phthisis, or consumption, by the paleness of the face, with a slight blush and transparency of the eye; convulsions by contortions of the countenance; typhus by a peculiar depression of the physiognomy; enteritis and colic by a characteristic expression of the countenance: approach of death by a sharpening of the features, designated the *facies hippocratica*. The commonest observer remarks whether a person is well or ill by the cast of countenance. It is indicative of the state of feelings. It is contorted in convulsions; expressive of anguish in painful diseases, as colic, enteritis, irritation, inflammation, pain or spasm in any part; from it we learn the strength or debility of the sick in many forms of disease. The yellowish, leaden coloured countenance denotes cancer; scurvy is characterised by the pallidity or lividity of the cheeks, the congestion or hæmorrhage from the gums; the face is red, animated, and tumefied in fevers, continued, intermittent and eruptive; in epistaxis, in one form of delirium, in the access of mania, hydrophobia, and accompanies cerebral congestions and hæmorrhages. There is a red patch on one cheek in hectic. In pneumonia, pleuritis, hepatitis, &c. the side of the face which corresponds to the affected organ is often red. In aneurism of the right side of the heart the face is injected, the lips are livid, the jugular veins congested, while the co-

lour is more vivid in hypertrophy of the left side of the heart. The countenance is contracted in inflammations of the abdominal viscera, cholera, colic, ileus, and all painful diseases.

All parts of the countenance afford diagnostic indications. Of all parts of the face, the eyes best express disease. The numerous communications which exist between the fifth pair of nerves and the great sympathetic, transmit to the brain all visceral perceptions, and also convey to the eyes all morbid changes in the internal organs. We should therefore observe the colour, motions, secretions, and states of the pupils, of the visual organs.

The colour of the sclerotic tunic is blue in the lymphatic and scrofulous, of pearly whiteness in the consumptive, yellow in the jaundiced, reddish in fevers, acute cerebral inflammations, and congestions, and principally in the eruptive fevers, measles, small-pox, scarlatina, &c. The eyes are often immovable in apoplexy, amaurosis, and cataract; their motions are rapid and convulsive in strabismus, hysteria, epilepsy, and other convulsive affections. The eyes are red and sparkle in affections of the brain, and are turned upwards during sleep in ventricular arachnitis, in the last stages of various diseases, and at the approach of death. The pupil is dilated in apoplexy or intense cerebral contraction, in narcotism from opium, &c., in effusion into the ventricles (hydrocephalus), in compression of the brain, though sometimes the pupillary aperture is contracted in these cases.

The eyes roll and the pupils are contracted in various degrees in convulsions; and there is strabismus in hydrocephalus. In mania and delirium tremens the eyes glisten, the aspect is wild, and in the latter the vision is depraved.

The eyelids and eyelashes offer means of diagnosis. The eyelids are open in all the agreeable passions, as joy, astonishment, &c.; they approach in pain and melancholy, and contract in painful and convulsive diseases, as in iritis, retinitis, and deep-seated ophthalmia. The eyelids are agitated in hydrocephaloid affections, hysteria, epilepsy, delirium tremens, mania; and are depressed in paralysis of their muscles in apoplexy. The eyelashes are elongated in the serofulous and

consumptive. There is lachrymation in conjunctivitis, in obstruction of the lachrymal ducts, in coryza, catarrh, influenza, eruptive fevers, hysteria, hypochondriasis, and dyspepsia.

The ears are more or less red in acute congestions or inflammations of the brain or scalp, and become livid in diseases of the heart, and in all diseases that impede respiration and circulation. The secretion of wax may be increased or diminished according as otitis is acute or chronic; and a copious fetid, purulent discharge is produced by ulceration or caries of the temporal bone. It also occurs in typhus and scarlatina maligna. Deafness depends on disease in the brain or ear, and often occurs in fevers, phthisis, and various other diseases on the approach of death.

The nose is enlarged in coryza, in serofula, and scurvy; it is diminished in chronic diseases, and especially in consumption. It is red in coryza, acne, and catarrh; it is pale or livid in typhus, ague, and when exposed to severe cold. The rapid or convulsive motions of the *alæ nasi* indicate laborious respiration, as in asthma, or the last stage of consumption, pneumonia, typhus, or eruptive fevers.

The lips, which commence the gastro-pulmonic mucous system, are red and dry in most of the gastric and pulmonary inflammations, pale in dropsies, and after severe uterine or other hæmorrhage; they are bluish in the cold state of fevers, in asthma, pneumonia, aneurism of the heart and large vessels, and whenever the circulation is languid or impeded, as in malignant cholera; they are livid or black in apoplexy, cerebral congestion, or asphyxia from strangulation, suffocation, suspension, or submersion. They are covered with a brown or black sordes in typhus and infantile remittent fever. They are covered with eruptions from cold or cutaneous diseases. They are ulcerated in aphthæ, stomatitis, syphilis, scurvy, &c. The lips tremble on the approach of convulsions, severe vomiting, or diarrhœa. The deviation of the commissure of the lips is a sign of compression on the brain, or of paralysis.

The gums are pale in anemia, chlorosis, ascites, and serofula; red in gastro-enteritic irritation or inflammation, and

during dentition; they are tumid, bloody, and exhale a fetid odour in scurvy, purpura maligna, and the last stage of fevers.

The teeth are peculiarly white in consumptive persons; they become yellow in dyspepsia, hepatitis, nephritis; are covered with tartar in gastric diseases; with a brown or black sordes in the last stage of typhus, eruptive, gastro-enteritic fevers; and they become carious during pregnancy.

The diagnosis afforded by the tongue is highly important. The tongue is connected with the stomach by the pneumogastric, or eighth pair of nerves. Hence its sympathy with the latter organ, and the cause of its being indicative of diseases of the digestive organs. Tumefaction of the tongue occurs in small-pox, aphthæ, stomatitis, hydrargyria or mercurial disease, and in fevers. The tongue is red in inflammations of the fauces, scarlatina maligna, of the stomach, intestinal tube, in the eruptive and other fevers; it is pale, soft, and moist in anemia, dropsies, scrofula, and asthenic diseases; it is dry, contracted, and retracted in the last stages of acute gastro-intestinal inflammations, diarrhoea, dysentery, adynamic, or ataxic, or typhous fevers. It is white and covered with mucus in gastro-intestinal irritations, in delirium tremens, in paralysis, and most chronic diseases. This colour distinguishes irritation in the mucous follicles, and may successively become grayish, yellowish, brown, or black, according to the intensity of the affection. In idiopathic typhus, or when the disease is symptomatic of inflammation of any organ or tissue in the body, the tongue, which was at first red and dry, becomes brown or black; the teeth, gums, and lips being covered with a brown or black sordes. Typhoid symptoms supervene on fractures, wounds, exanthematous eruptions, and inflammations of the organs in the head, chest, abdomen, and pelvis. Hence we employ the term symptomatic typhus.

After the examination of the different parts of the countenance, we should inspect the rest of the cutaneous surface—the neck, chest, abdomen, and extremities. Of this the hand is examined next to the countenance, both as to temperature and the state of the pulse. In hectic, the palm of the hand is hot and dry; the nails are livid in cerebral and pulmonic con-

gestions, yellow in jaundice, and curved or arched in phthisis and scrofula.

The touch or application of the hand enables us to discover the augmentation, diminution, changes of the various tissues, modifications of temperature, presence of tumours, the presence of cellular infiltration, as in anasarca; fluctuation, as in ascites, hydrothorax, hydrocele, ovarian dropsy, pregnancy, and diseases of the uterus; gastritis, hepatitis, peritonitis, enteritis, hysteritis, nephritis, splenitis, and all the diseases of the chest by percussion, succussion, mensuration, and mediate auscultation. We discover calculus in the bladder by catheterism; and œsophagean, rectal, urethral, lachrymal, and aural strictures or obstructions, by manual operations. The morbid conditions of temperature are ascertained by the touch. Local defect of heat depends upon cerebral or gastric irritation; the limbs are cold with dyspeptics, and also at the approach of death. General deficiency, indicated by rigors or shivering, may depend upon great prostration of the vital powers, as after violent injuries of the head, or on severe hæmorrhage; incipient fevers; thoracic, abdominal, or pelvic inflammations, or suppuration of internal organs. Excess of local heat indicates irritation or inflammation; and general heat, reaction, constitutional irritation, fevers, or inflammation of deep-seated organs. Dryness of the cutaneous surface is observed in dropsies, diabetes, and the hot stage of the different fevers; while moisture of this part may be induced by relaxation or debility. Redness is a sign of inflammation; when circumscribed on the cheek, it is a sign of hectic fever, or of mesenteric disease in children, or the infantile remittent fever. Paleness of the skin, especially of the face, which is succeeded by blushing, indicates mesenteric disease in children, and phthisis in adults.

Yellowness of the face and skin is a sign of deranged secretion of bile.

Coffee, or coppered colour, is produced by syphilis; and black spots indicate purpura, scurvy, or determination of the blood in the last stage of continued and eruptive fever.

The sense of hearing is highly valuable as a diagnostic in

diseases of the chest, heart, in pregnancy, and in deep-seated fractures. The sense of smell enables us to discover the various odours of the excretions, and these may vary according to aliments or drinks, or medicines, whose presence will be detected in the expired air or breath, the urine and perspiration. The cranial, axillary, inguinal, and pedal transpirations differ; the excretions exhale an acid odour in infancy, and sometimes in eruptive fevers; the breath is fœtid in ozena, carious teeth, scurvy, mercurial salivation, and in the last stage of consumption, typhus, and cerebral diseases. Many of the cutaneous eruptions have particular odours, small-pox, porrigo, &c. The puerperal and catamenial discharges possess peculiar odours. The cadaverous odour of the breath is a fatal sign in many diseases, and the chief symptom of gangrene of the lung.

The last sense is taste, which is seldom employed in the exploration of morbid productions, with the exception of the urine in diabetes, and other anormal fluids. In the early ages the bronchial, gastritic, intestinal, renal, and uterine excretions were tasted; but there are few pathologists of our times so zealous as to avail themselves of this mode of exploring the nature of diseases.

The morbid conditions of attitude are diagnostic of disease. When a patient reposes on the back in the last stage of fever, or acute diseases, it is a proof that the powers of life are depressed, as more muscular exertion is required to lie on the sides than the back. This position, attended with the descent of the sick in bed, is a fatal sign in acute diseases. This position, when conjoined with flexion of the lower limbs, so as to relax the abdominal muscles, is a sign of abdominal inflammation, as in enteritis, peritonitis, &c. Decubitus on the abdominal surface of the trunk is a sign of colic, disease of the kidney, or spine. In pleurisy and pleurodynia, the patient lies on the sound side; in pneumonia and effusion into the cavity of the pleura, or lung, the sufferer lies on the affected side. In chronic hepatitis the sick person reposes on the right side, because if he placed himself upon the other, the weight of the liver on its ligaments would induce pain and uneasiness. When children are about to be attacked with convulsions,

the thumbs are turned across the fingers, and the hands are clenched. In diseases of the kidney, the lower limb is sometimes retracted, or painful.

Signs or Indications afforded by the Nervous System.—The signs of disease in this system are, large size of the head, great growth of hair, pulsation of the temporal, vertebral, and carotid arteries, heat of scalp, pain in the head, intolerance of light or sound, sense of tightness in the forehead, sense of weight in the occiput, tinnitus aurium, acute or dull bearing, vertigo, somnolence, drowsiness or coma, defective articulations, rolling the head on the pillow, and excessive restlessness. The countenance is red, livid, or purple, when the respiration is impeded, the circulation hurried; and the digestive organs deranged. The intellectual faculties and the powers of motion and sensibility are disordered. When sense and motion are disturbed on one side, the disease of the brain is on the opposite one, generally though not invariably. In paralysis, with relaxation of the muscles, there is effusion or change of structure in the substance of the brain. Paralysis, with rigid muscles, or with convulsion, depends upon irritation or inflammation of the brain, arising from the presence of a foreign substance, as a clot of blood, or effusion. When the intellects are deranged and delirium comes on, the pia mater or arachnoid membrane over the superior parts of the brain is inflamed. These membranes are inflamed at the base of the brain, especially in children, when slight headache is succeeded by delirium or coma, and convulsions of both sides of the body appear or reappear. Headache, succeeded by fever, and increased by noise, light, or exertion, is a symptom of phrenitis, acute or chronic; but sometimes there is intense headache, or rather circumscribed pain in the temple or other part of the scalp, which is suddenly excited in nervous dyspeptic persons by exposure to cold, and will be relieved by stimulation, brandy and water, ammonia, &c., and not by depletion. Headache arises from disorder of the stomach in bilious persons, or after severe hæmorrhage, and then is not caused by determination of the blood to the part. Hemicrania is usually confined to the scalp, may be periodical, or arise

from rheumatism of the occipito-frontalis fascia. Vertigo also depends upon too much or too little blood in the brain; convulsions and delirium occur under similar conditions. The nervous delirium of drunkards does not in general depend on vascular action, and is speedily cured by the exhibition of the habitual stimulus.

Coma often depends on cerebral congestion, but may arise from exhaustion of the vital powers, as in the hydrocephaloid disorder hereafter described. Inflammation of the substance of the brain is characterised, according to the French, by absence of delirium, rapid insensibility, urinous smell, and paralysis, with involuntary contraction of the flexor muscles. Paralysis of the upper extremities and respiratory muscles is caused by disorder of the cervical portion of the medulla spinalis; and when the lumbar portion is deranged, there will be paralysis of the lower extremities, rectum, and bladder. If the spine is excurvated, its membranes may be inflamed.

Phenomena and Signs afforded by the Heart.—The phenomena are four: 1st, The extent the movements of the heart are perceptible; 2d, The impulse which they communicate; 3d, The sound which accompanies them; and, 4th, Their rhythm, or order of their succession.

Movements of the Heart.—In most instances the pulsations of the heart are heard in the præcordial regions, between the fifth and seventh ribs, and at the inferior part of the sternum, or in the epigastrium. The motion of the left cavities is perceptible in the former; that of the right in the latter. In fat persons we sometimes cannot distinguish the motions of the heart by the hand; and the space in which we detect them by the stethoscope is not more than a square inch; but in thin emaciated persons, or in those who have narrow chests, we hear them in the inferior and middle part of the sternum, under the left clavicle, and even on the right side of the thorax. There is nothing unnatural in hearing the actions of the heart in these situations; while it is greatest in the præcordial region, and diminished in the other situations. The unaecustomed extent of these actions denotes a passive dilatation of the heart. But it is always to be recollected that

accidental causes can produce a temporary increase of the heart's actions; such as nervous agitation, fever, diseases, and malformation of the chest.

Impulse.—When the hand, ear, or stethoscope is applied over the cardiac region, a shock is perceived, which is called *impulse*. It is strong according to the thickness of the walls or parietes of the heart, and is so powerful in some instances as to elevate the head of the auscultator. When strong, it indicates hypertrophy; when absent, dilatation of the heart. In ordinary cases it may be imperceptible to the hand, but distinctly heard by the cylinder; and, on the contrary, the hand may discover it in thin and excitable persons, when the instrument cannot enable us to detect it. In general it is distinguishable in the præcordial region, at the epigastrium, when the sternum is short, also below the left clavicle, and slightly at the back, when the walls of the heart are thickened and dilated at the same time. The impulse of the heart diminishes or nearly ceases, whenever there is great dyspnœa, as in hepatization of the lung, pleuritic effusion, pulmonary œdema, congestion of the lung, or asthma.

It is increased by walking, riding on horseback, the chase, ascending stairs, by nervous agitation, palpitations, fever, especially when the heart is firm and thickened, and of course still more when it is hypertrophied.

The Sound.—In a healthy adult there are two distinct sounds (however small the heart may be), which are discoverable by the stethoscope, after ordinary means fail: the one is clear, sharp, and analogous to that made by the clapper valve of a bellows, and corresponds with the systole of the auricles; the other is dull and lengthened, is synchronous with the arterial pulsation and the impulse, and indicates the contraction of the ventricles.

The sounds of the right cavities are most distinctly heard at the base of the sternum; those of the left at the cartilages of the ribs; and all differences between them denote pathological conditions.

These sounds are heard more plainly when the walls of the heart are thin and more feeble, as in persons of a spare habit;

while in those of a full habit, or in those affected with hypertrophy, the sound of the ventricles is not heard, and that of the auricles is dull and scarcely audible.

The sound of the auricles is duller and more indistinct when the edge of the lung is stretched over the part, or entirely covers it; in this case, the absence of impulsion proves that the diminished sound is not caused by hypertrophy. In such instances the sound is marked by the respiratory murmur over the heart, or that caused from the expulsion of the air by the compression of the heart.

The *rhythm* is meant to express the order in which the different parts of the heart contract, of the respective durations of these contractions, of their successions and relations.

The movements of the heart are as follow: each contraction of the ventricles coincides with the dilatation of the arteries, and is accompanied by a dull, prolonged sound; this is instantly followed by a clear, quick sound, appearing to intercept the former abruptly, and is caused by the contraction of the auricles; a moment of repose succeeds, when the ventricles act again, and in this manner the succession proceeds.

The sounds of the heart's contractions may be duller, clearer, or louder than natural, or sounds altogether new may be produced; the latter are designated *bruit de soufflet*, bellows sound, *bruit de râpe*, rasp or file sound, *craquement de cuir*, new leather sound.

The *bellows sound* may accompany or replace the sounds afforded by the contractions of the ventricles, auricles, or large arteries; it is most commonly heard during ventricular contraction; and very often it exists in one ventricle only. It is rarely constant, it ceases and reappears suddenly, it may be continued or intermittent, and may be excited by slight mental emotion. It is observable in hysteria and hypochondriasis, and in those predisposed to hæmorrhages. It may be found in any of the large arteries, though absent in the heart, and *vice versa*. It is sometimes discoverable in the recumbent position only. It may exist in perfect health; but is more frequently detected in hearts affected with dilatation and

hypertrophy, and in narrowing of the orifices. Even in all these cases it may be present one day, and absent the next.

The *rasp* or *file sound* is heard in the heart only, and may accompany the contractions of the ventricles and auricles. When once developed, *it never ceases*, and is said to arise from the contraction or narrowing of an orifice of the heart. The obstructed orifice may be discovered by the sound being more distinct during the contraction of the auricle or of the ventricle, or by being heard under the sternum or the cartilages of the ribs. This sign indicates contraction of the orifices by cartilaginous deposits or ossification of the valves. When it responds to the systole of the ventricle, the sigmoid valves are affected; and if it occurs during the contraction of the auricles, it occupies the auriculo-ventricular orifice.

The *new leather sound* is compared to the crackling produced by sitting upon a new saddle, exists only at the heart, and accompanies the contraction of the ventricles. It has never been heard except in pericarditis.

The *purring sound* is compared to the murmur of a cat when caressed, and constantly accompanies the rasp sound. It indicates a mechanical obstruction to the course of the blood by contraction of some of the orifices of the heart.

A diminution of the sounds of the heart is caused by increased thickness of the walls of the organ, and, if combined with weakness of impulse, it indicates softening of structure.

Rhythm.—The ventricular contraction may be lengthened, as also the period of repose, which indicates hypertrophy of the ventricles.

The contractions and repose may be shorter and quicker than natural, the pulse may be slow or quick, but these signs are not indicative of disease.

The contractions of the auricles are rarely shortened or lengthened. They sometimes anticipate those of the ventricles, especially during palpitation; hence the auricular sound is masked by the ventricular, and in hypertrophy becomes imperceptible. Sometimes there may be one contraction of the ventricles and two or three of the auricles, or the reverse; but

these phenomena do not indicate disease, nor even affect the pulse. In some instances there are two or more equal contractions, and then we find one or more weaker or irregular, or a complete intermission: under these circumstances, we may expect disease.

Sometimes the contractions are so frequent and irregular as to render it impossible to analyze them, and then they indicate organic disease.

The action of the heart may be so violent as to be heard at a distance of one or two feet, or distinctly seen on the surface of the chest. This may occur without any disease, or be symptomatic of dyspepsia, hydrothorax, ascites, utero-gestation, &c. ; but is characteristic of hypertrophy, and often arises from gaseous exhalation in the pericardium or stomach.

Palpitations, irregularities, and intermissions of the heart's action may be symptomatic of diseases unconnected with the heart, and may occur or continue though the person is in perfect health.

The exploration of the heart's action by means of the stethoscope, enables us to detect the real condition of the circulation; and furnishes a much more certain indication than the pulse of the necessity of depletion.

The pulsations of the heart may be heard beyond the usual limits, as from the left axilla to the region of the stomach, but not so low on the right side. In such cases there is an indication that the ventricular walls are thinned, that the heart is dilated, and therefore it strikes the sternum and chest with an enlarged surface. But this increased extent of pulsation may be independent of disease of the heart; it may be caused by various diseases in the chest, as narrowness of its parietes, the existence of morbid productions, solid or fluid; in fact, by any cause that accelerates the pulse.

It has been already stated that the action of the heart may only be distinguishable in the space of a square inch; and this arises from increased thickness of the parietes of the organ.

Again, the pulsations of the heart may be felt in the right side when the left side of the chest contains a quantity of fluid or a tumour, and when the abdomen is preternaturally dis-

tended. When the pulsation is increased and permanent, it is a sign of hypertrophy.

Stethoscopic Signs in Diseases of the Heart.—*Hypertrophy*: augmentation of impulse, diminution of sound, and of the extent to which the actions of the heart can be heard. When the left ventricle is affected, the impulse is very strong between the fifth and seventh ribs, and may be sufficient to elevate the observer's head: sound duller and more prolonged than natural; systole of the auricle very short and slightly sonorous. When the right ventricle is affected, a stronger impulse beneath the lower portion of the sternum; sound obscure, but not so dull as in former variety. When the left ventricle is very much enlarged, it is more easily heard than in the left cardiac region, as the right becomes posterior and is not heard at all. The swelling and pulsation of the jugular veins are always constant in hypertrophy of the right ventricle, but rarely when the left is affected; and therefore the diagnosis is easily formed. When both ventricles are simultaneously affected, the impulse is as well marked in the right as in the left præcordial regions.

Dilatation of Left Ventricle.—Impulse in left cardiac region diminished; sound augmented over a large surface. When right is affected, sound clear and distinct under the sternum, and between the fifth and seventh ribs of the right side; impulse feeble.

Dilatation with Hypertrophy.—This complication is more common than either of its constituents in a simple or idiopathic form, and is characterised by impulse and sound at the same time. When the ventricles contract, systole of the auricles very sonorous.

In these cases, the body of the patient, however calm, and the bed-clothes, are shaken at every contraction of the heart.

Hypertrophy of one Ventricle, with Dilatation of the other, is by no means rare. The diagnosis can readily be formed by attention to the signs of both diseases.

Hypertrophy and Dilatation of the Auricles are very rare, never isolated, and generally complicated with contraction of the auriculo-ventricular orifices.

Diseases of the valves, cartilaginous or osseous : rasp sound, and purring tremor of the auricle, when the mitral valve is affected ; of the ventricle, when the sigmoid valves of the aorta are indurated. The tricuspid or sigmoid valves of the pulmonary artery are seldom affected : then we find rasp and bellows sounds under the sternum. *Verrucose vegetations* on the valves diminish the orifices, and are attended by rasp sound, less dull, and more resembling the bellows sound ; while the purring tremor is less sensible to the hand : in some cases, the rasp and bellows sounds succeed each other, and there is a sound like the cooing of a dove.

Induration of the Heart is characterised by the same signs as hypertrophy.

In the following diseases, the stethoscopic signs are dubious.

Pericarditis is indicated by the new leather sound ; and percussion of the præcordial region yields a duller sound than natural : still the disease is oftener suspected than recognised.

Hydro-pericardium.—Pathognomonic sign, a flat sound as in the last disease, and the actions of the heart seem to affect the hand and the ear, as if through a soft medium.

Aneurism of the thoracic Aorta.—Pulsations on the superior and anterior part of the chest, isochronous with the pulse. When the abdominal aorta is affected, pulsation over it is the only sign.

Nervous Palpitation of the Heart is characterised by the impulse being strong at first, the sound clear but not extensive, the bellows sound and purring thrill being perceived throughout the arterial system.

Signs afforded by the Pulse.

Pulse, pulsus, pulsatio, sphymus, pouls, French—das puls, Ger., is the beating of the heart, the movement and dilatation of the arteries, considered in their relation to health and disease. The knowledge of the natural pulse, and of its modifications in different diseases, was denominated the *sphygmica art, ars sphygmica*.

The natural Pulse of the Arteries.—In the normal or natural state the pulse of an adult is easily felt, is soft, equal, regular,

neither too frequent nor too slow; it beats from 65 to 70, or 75 times in a minute, the pulsations being at an equal distance from each other. It is sometimes slower in health, and does not exceed 35, 40, or 50. Napoleon's pulse was 54. Dr. Graves mentions a lady in whom it was 35; and Dr. Jackson of Philadelphia another, in whom it could not be felt in any part of the body. In this last instance, it was natural before a severe attack of rheumatism. Dr. Thomas Williams knew a man who enjoyed perfect health, and had a pulse not exceeding 15 beats in a minute. The pulse may be intermittent or irregular in health, and become regular during disease, and after convalescence assume its former condition. In new-born infants it beats, according to Heberden, from 120 to 140 in a minute; about the second year 100; and at puberty about 80. In one case of a man, aged 80, it was 26, and in another only 12: Lizari found it only 11, while Wendt counted it at 243. In adults it is full, more developed than in infancy and adolescence; in woman it is 10 or 12 beats more than in man; in old age it is weaker, larger, harder, and from 50 to 60. Dr. Falconer was, perhaps, mistaken, when he maintained that the pulse in old age was more frequent than in infants. It is more frequent and strong in those of sanguine or bilious temperament; it is feeble and rare in lymphatic and melancholic subjects. It is more frequent after conception, and very much accelerated during parturition. It is said to differ according to stature, but the modifications from this cause have not been accurately determined. As the human body is influenced by the diurnal revolution, the motion of the arteries has been found to vary at different hours of the day. Bryan Robinson having accurately observed the variations of arterial motion, constructed a table, by which it appears that the pulse is slower in the morning, than at any other hour of the day; that after mid-day it is more frequent; then it becomes slower from two to eight o'clock, but beats 8 or 10 times more than in the morning; it is less frequent during sleep; and about two hours after midnight it rises and falls until seven or eight o'clock. He concludes that these variations of the pulse coincide with those of the barometer and

thermometer. It is also well known to physicians, that the pulse is more frequent in the evening in all diseases accompanied by fever. It varies according to the posture of the body, a fact first noticed by Dr. Macdonnell of Belfast, subsequently by Dr. Thomson, in his work on Inflammation, by Dr. Stroud, and recently by Dr. Graves in the Dublin Hospital Reports, 1830, v. 5.

The last-named able physician states that he ascertained, by numerous experiments, that in healthy persons the pulse in the erect posture is more frequent than in the horizontal, by from 6 to 15 beats in the minute; and if the pulse is but 60, the difference is generally not more than six or eight, but if it is raised to 90 or 100 by moderate exercise, the difference may be 20 or 30. The body being placed with the head downwards and the feet upwards, no further retardation of the pulse was effected; neither, on the other hand, was it accelerated beyond the number observed in the horizontal position.

There are certain rules which must be observed in making the exploration of the pulse.—1. We should be acquainted with the characters of the pulse in the different periods of life, in the sexes, temperaments, according to corporeal development, and as influenced by moral and physical causes:—it is manifest that without this knowledge we cannot distinguish, with accuracy, its conditions in various diseases.—2. The temperature of the hand must not be too high or too low, and that of the patient must be taken into consideration.—3. The examination must not be made on entering the chamber of the sick, as the approach of a medical practitioner generally agitates the mind of the patient, and causes an increase of the moral and physical force, and consequently of the action of the heart and arteries. This fact must be remembered whenever the physician is a stranger, and attends for the first time. The pulse will be also accelerated after the ingestion of food, stimulating drinks, exercise, mental emotions, more especially when the patient is delicate or feeble, and also after laughing, coughing, groaning, hiccuping, crying, or much speaking. It is therefore difficult to explore the pulse, in consequence of these inconveniences, but an attentive and cautious practitioner will remedy all of them, by feeling the pulse soon after his visit,

and again before his departure; and by carefully estimating its characteristics on both these occasions, he will generally arrive at a correct conclusion. It is held that the exploration of the pulse is most correct in hospitals, where patients expecting the medical attendants, are free from emotions and all excesses.—4. The patient should be placed on his back, or in the sitting posture, with the arms free from pressure, or he should repose on his side, and in such case the pulse in the upper wrist must be felt.—5. The index and middle fingers are to be applied over the radial artery, a little above the styloid apophysis of the radius, and the fore-arm being slightly flexed between pronation and supination. The thumb is to be placed on the posterior surface of the radius. Dr. Rucco recommends the four fingers along the artery, as in certain diseases the pulsatile force may differ in a short extent of the artery, and may not be detected, unless the fingers are applied as he suggests. Too much pressure must not be made with the fingers, as it would stop the pulse, or change the position of the artery, and lead to an erroneous conclusion. The fingers ought to be removed from the artery for a few seconds, as their sensibility will be diminished by much compression. In many cases the artery cannot be felt by the ring and little fingers, and in most persons, the sense of touch in these is much less than in the index and middle fingers. In fat people, considerable compression is requisite to feel the pulse, in consequence of the quantity of cellular membrane which covers the artery. In old persons there is little fat, the arteries are superficial; little pressure with fingers is necessary, as we can often observe the pulsation. There is no rule as to the length of time requisite for the examination of the pulse. A watch with a second hand is necessary to ascertain the number of pulsations in a minute. It is necessary to feel the pulse in both arms, as there is always a difference in the radial arteries, that of the right arm being larger; and the pulsation may be regular in one, and irregular in the other wrist, or it may be absent for months in one arm (Parry) or in both, according to Haller and Jackson. In the last case, the radial arteries either deviate from their usual course, by turning over the radius higher than the wrist, or

they may take their ordinary tract, and yet not pulsate. In such instances, the carotid, temporal, or brachial arteries must be examined, or the heart itself. The pulse may be full in one wrist and small in the other, and hence the necessity of examining both. It has been said that we should feel the left wrist with the right hand, and reciprocally; but this is unnecessary, as the sense of touch is the same in the fingers of both hands, unless when they are indurated in one who has practised much on some stringed instrument.

The pulse is not of the same frequency in any two individuals. It is very feeble in some, indeed scarcely discernible, though the health is excellent. In old persons, who are thin, it is generally strong, and may deceive a young practitioner. Tumours may press on the brachial artery, or this vessel may be aneurismal, and in both cases the pulse will be affected at the wrist. The right arm is larger and more developed in most people, the pulse is larger or fuller, while the reverse occurs in the left-handed. The pulse will be full in one arm, and indicate venesection, while it is small and soft in the other, and seems to require stimulants. When this diversity exists, we should feel the heart. But sometimes the pulse is full at the heart and small at the wrist, as in contraction of the auriculo-ventricular opening. There may be extensive disease of the heart, and the radial pulse be natural. Auscultation will enable us to determine most of the diseases of the heart, and ought to be universally studied by medical practitioners.

The illimitable varieties and modifications of the pulse led Celsus to call it a *res fallacissima*, and Parry to denominate it a deceptive criterion. Nevertheless the pulse greatly assists us in our diagnosis, prognosis, and therapeutics. Its modifications are—*frequency, slowness, force or strength, rhythm, and regularity*. In the state of disease, the pulse is *frequent or rare, quick or slow, hard or soft, great or small, strong or feeble, regular or irregular, unequal, intermittent, and insensible*. One, two, or three of these qualities may be combined.

Pulsus frequens, frequent pulse, exists when the number of beats in a minute exceed those in health at the different ages.

This was said to be a sign of febrile diseases by Galen, Boerhaave, Hoffman, and a host of others; but Fordyce well observed, that fevers might exist and prove fatal without this symptom.—*Dissertation on Simple Fever*, p. 70. This condition of the pulse is generally observed in febrile and inflammatory diseases.

Pulsus rarus, slow or sluggish pulse, was opposed to the frequent, and also beats less than the natural. It depends on diminished irritability in the heart, and is caused by cerebral oppression, as in apoplexy, compression of the brain, hydrocephalus, narcotism, and intense cold. It is sometimes called a jerking pulse; it is a bad sign in fevers and cerebral affections.

Pulsus celer, quick pulse, is generally confounded with a frequent one, as is well illustrated by nearly all the translators of Dr. Cullen's Nosology, who render his pulsus frequens a quick pulse. The first is that in which the artery suddenly strikes the finger, causing a fewer number of pulsations in a minute, while the second is that in which there is a great number of pulsations in the same space of time; so that the pulse may be quick and rare, slow and frequent, quick and frequent, slow and rare. Darwin has well explained the distinction in question. The pulse will often be slow as to number, but quick as to the impression on the finger, as in apoplexy and cerebral oppression from narcotism. "We must not," says Darwin, "confound frequency of repetition with quickness of motion, or the number of pulsations with the velocity with which the fibres, which constitute the coats of the arteries, contract themselves."

Pulsus iners vel tardus, a slow pulse, is opposed to the *quick*, and has relation to each pulsation; it arises from the same cause as the rare pulse. When this occurs in fevers and other acute diseases, it indicates a favourable change.

Pulsus durus, a hard pulse, is compared to the stroke given by the string of a musical instrument; it is supposed to depend on the contraction of the muscular coat of the artery; it is small and generally quick; it indicates enteritis, peritonitis, and, according to Hoffman, "pain, spasm, and convul-

sion."—(*De Pulsuum Natura*, &c. p. 17.) When small at the same time, it is sometimes called a *wiry* pulse. Hoffman said it was caused by spasm of the heart and arteries; Hunter referred it to this condition of the latter alone (*Treatise on the Blood*); and Fordyce to incipient contraction of the artery (*Dissert. on Simple Fever*). It is found in pleuritis, synocha, inflammations, and acute rheumatism, but in such cases it is strong and full. It is sometimes called an obstructed pulse; it requires venesection, and if small becomes fuller, and the blood on cooling exhibits the buffy coat.

Pulsus mollis, a *soft pulse*, is caused by relaxation or debility of the muscular coat of the artery; it is often weak and sometimes dull; it supervenes on the hard pulse after venesection, and often accompanies convalescence, and in disease indicates a remission or improvement. But it is not always favourable, for we find it in protracted pneumonia, and then it is weak (*Boerhaave Institut. Rei Med.* 962, Cullen eccxxvi.), while in the accession of continued fever it presages that the disease will be formidable, and that there will be great debility in the last stage (*Fordyce Op. Cit.* p. 53). It is more common with the female than with the male; is often induced by vomiting, and is a sign of delicate or bad health.

Pulsus magnus, a *great pulse*, is said to be present when the artery dilates more than naturally, though the number of pulsations may be normal or rarer. This quality is supposed to arise from weakness, and not so much from fulness of the artery; and therefore it is inferred that the pulsations are slower than when the pulse is the stronger. It exists in coma, vertigo, and lethargy, and these diseases are more dangerous, the greater the pulse.—(*F. Home Principia Med.* p. 228.) This pulse seldom indicates venesection.

Pulsus parvus, a *small pulse*, was opposed to the great, and was attributed to a want of power in the heart to propel the blood, as in cases of debility; or to a contracted state of the artery, as in enteritis, &c. When it occurs in typhus, after hæmorrhages and fluxes, it is usually soft, weak, and frequent; indicates great debility, and requires both opium and

stimuli. It is a bad sign towards the termination of typhus, visceral, and other inflammations, small-pox, measles, scarlatina, intestinal irritation, scurvy; in a word, it indicates great debility, or prostration of the vital powers. But when the pulse is small, hard, sharp, or wiry, as in enteritis, peritonitis, carditis, &c. it requires venesection, by which it becomes fuller and softer.

Pulsus plenus, a full pulse, is that in which the artery does not narrow itself after each dilatation, but on each pulsation percusses the finger with a full, soft, obtuse stroke; it gives a weaker stroke to the finger than an artery, whose pulse is stronger and freer, which is called *great*, as already described. It was said to depend on plethora; it precedes natural or difficult menstruation and hæmorrhages; it may be quick or slow, and in general requires venesection.

Pulsus validus seu fortis, a strong pulse, depends on the energy of the ventricular contraction, and often upon hypertrophy of the left ventricle. Those who enjoy good health and constitutions, who pursue laborious employments, and who live regularly, have this kind of pulse. It is characteristic of synocha, various inflammations, hæmorrhages, especially from the nose, lungs, stomach, intestines, kidneys, uterus, and other parts of the body; and often precedes perspiration, by which intermittent and remittent fevers terminate. It shows that the sanguineous circulation is vigorous, that the vessels are easily excited, and it admonishes us of the necessity of diminishing the mass of blood; it indicates plethora, and warrants depletion.

Pulsus debilis, a weak pulse, exists when the artery dilates very sparingly, indicating a low degree of irritability in the heart and exhaustion of the vascular system; it is generally frequent, thready, compressible, and easily "put out," or stopped; it often precedes death, and is a sign of debility; it is observed in carditis and pericarditis, on the accession of the cold stage of intermittent fever, during the pain arising from biliary calculi, in primary or secondary affections of the stomach, in consequence of a blow on this organ, or of full doses of digitalis. This kind of pulse is felt in phrenitis

(Dr. F. Home), in certain cases of amenorrhœa (Darwin), and in elephantiasis (Aretæus). Dr. Gregory said, it exists in persons of the lymphatic temperament

Pulsus regularis, a regular pulse, is that in which all the pulsations are alike.

Pulsus irregularis, vel inequalis, an irregular or unequal pulse, is when the pulsations do not correspond to each other in frequency, quickness, and force. There are various inequalities, viz. it is called *dicrotus, bisferiens, redoubled, bisiliens*, when two strokes follow each other rapidly, and are separated from the two succeeding by an interval of repose, and this is said to indicate the approach of hæmorrhage; *ineiduus, incidens, incident*, when the second pulsation is weaker than the first, the third than the fourth, after which there is a stroke as strong as the first, and so on: the old writers held that this predicted critical perspiration and dissolution of disease (Nihell). Some persons have an irregular pulse in health, as was exemplified in the case of Addison, as attested by his biographer Tieckell. Another pulse was termed *myurus*, when the second pulsation is weaker than the first, and several beats run into each other. This is also called a vermicular or fluttering pulse, is stopped by the slightest pressure, and indicates low fever and disease of the brain.

Pulsus intermittens, an intermittent pulse, exists when after one or more beats there occurs a cessation or repose. It was held a certain sign of approaching death by Galen. (*De Presag. et Pulsibus*), but is the ordinary one of some persons in health, becomes regular during disease, and on recovery assumes its habitual character. This was well illustrated in the case of a lady in Russell-square, who was attended some time since by the writer. This kind of pulse may be caused by disease of the heart, hydrops pericardii, hydrothorax, hydrocephalus, compression or concussion of the brain, vermination, and other intestinal diseases. It was considered a fatal sign in the last stage of fever by Solano and Nihell, unless diarrhœa supervened, and it may be removed according to Prosper Alpinus when the urine becomes turbid. (*De Presag. Vitæ et Mortis*, lib. iv. c. 4.) Heberden, on the

contrary, maintained that it might arise from trivial causes, and was not a bad sign, while Fordyce thought it a mortal symptom when it supervened on simple fever. Abernethy agreed with Heberden, and stated that his own pulse was intermittent and irregular under mental agitation, and dissented from all who considered this kind of pulse a dangerous symptom. However discrepant these opinions may appear, it is certain that an intermittent pulse is in general a dangerous symptom in the last stage of fever or other acute diseases, as it shows that the vital powers are very much diminished.

There are divers other species of pulses dependent on physical differences easily appreciable; some of which are described by Borden and Rucco. The former describes the following species, the irritative, nervous, convulsive, non-critical, compressed, frequent, quick, hard, sharp, and compressible.

The *critical pulse* is said to be dilated, jerking, full, strong, frequent, and often unequal.

Signs or Morbid Indications afforded by the Respiratory System.—The splendid discovery of Laennec has led to a ready diagnosis in diseases of the chest. The crepitating râle occurs in the first stage of pneumonia and œdema. The mucous râle is characteristic of catarrh, the sputa may be opaque, transparent, viscid or puriform, colourless or greenish yellow. In some cases the face is congested, there is great dyspnœa without disease of the heart, the fine extremities of the bronchi being filled with mucus. When the sputa are round and opaque with white streaks, and pectoriloquy, phthisis is indicated. Pneumonia exists, when the sound is dull, the sputa are viscid and tinged with blood, the respiration is incomplete, the crepitating râle is present: these symptoms leave no doubt, though no pain is felt. In pleuritis the pain is acute, the respiratory murmur cannot be perceived by auscultation, and there is œgophony. The metallic tingling proves the existence of effusion into the pleura, or hydrothorax with a fistulous communication into the bronchi. When the nostrils are impervious, we may suspect catarrh, ozena, secondary syphilis. The voice is guttural in cynanche tonsillaris. A

flapping sound in the trachea may be caused by inflammation of the epiglottis, though it may occur in phthisis, imprecided by any sign of laryngeal inflammation. Pectoriloquy is a sign of the last stage of phthisis. Percussion, mensuration, and succussion, or shaking the body, assist us in our diagnosis of chest diseases. During healthy respiration in adults, inspiration and expiration succeed each other with regularity. There are from fifteen to twenty respirations in a minute, but more in women, weak individuals, and children. Respiration is affected by the intercostal and other inspiratory muscles in health, and is called thoracic, or by the diaphragm alone, as in fevers, and near the approach of death, when it is called abdominal. Respiration undergoes the same alterations as the pulse. It may be frequent (*respiratio frequens*) when it exceeds the natural number, or rare (*r. rara*) when it is slower. It is frequent in all febrile diseases, in verminous affections, as well as in pulmonary diseases. It is rare in comatose and hysterical diseases, and in the last moments of life. It is quick (*r. celer*), and slow (*r. tarda*). It is quick when the inspiration is short, rapid, and abrupt; slow when long and gradual. Quick is united with frequent respiration, and is then called accelerated; and this may become panting. Quick may be combined with rare, and slow depends on the same causes as rare.

When the inspirations and expirations follow each other at equal intervals, respiration is said to be regular; when these intervals are prolonged, it is called irregular; intermittent, when one or more inspirations supervene, late or not at all; interrupted when expiration takes place before inspiration is finished. These modifications occur in thoracic and abdominal inflammations, and particularly in nervous affections. Respiration is great when the inspirations and expirations are perfect: it is small when dilatation is scarcely sensible. The respiration is frequent, quick, and small, though the chest is completely expanded, as in peripneumonia, and this is called high respiration. The large and rare respiration constitutes the sublime; it is usual in cerebral fevers, and on the ap-

proach of phrenitic delirium. The smallness of respiration is indicative of thoracic affection.

Respiration is equal, when the inspirations, whether quick or slow, are followed by similar expirations; unequal when one of these motions is longer than the other. This kind of breathing occurs in adynamic fevers, asthma, and spasmodic disorders. In pleuritis the inspiration is quick; the expiration, though short, appears long: the reverse is seen in pneumonia.

The respiration is easy when the expiratory muscles act properly; it is difficult when the large accessory muscles are called into action, or when the proper inspiratory muscles contract with violence, or as if convulsively. The scaleni muscles project on the neck; the intercostals are similarly affected: this form of breathing may be difficult or laborious or suffocating. Orthopnoea is a species of suffocating respiration, which requires the erect position, as in asthma. The breathing is difficult in thoracic and abdominal diseases, in every case in which the entrance of the air into the lungs is prevented, or when the thorax cannot dilate, either in consequence of effusion into the cavity of the pleura, or by external pressure on the chest.

The respiration is complete when both lungs act simultaneously: it is characterised by equality of force and extent in the thoracic movements; it is incomplete when one side moves less than the other, or is wholly immoveable: it is diagnostic of chest complaints, and of pleurisy and pneumonia in infants. It is, however, seen in health, but has been produced by strong adhesions. Pneumonia, effusion, or pleurodynia will cause it.

Abdominal respiration is characterised by elevation of the abdomen during inspiration, and sinking during expiration; the ribs execute no movement. It is in general a sign of death, but is the natural respiration of old persons, the cartilages of whose ribs are ossified, and resist the action of the muscles enfeebled by age.

Thoracic respiration is effected by the elevation of the ribs

without the aid of the diaphragm, and is observed in abdominal inflammations, when the abdomen is distended by morbid fluids (dropsy), or solids (tumours, as enlarged ovaries), or the gravid uterus. When the neck is short and thick, there is a predisposition to apoplexy or other cerebral disease; when long and slender, the shoulders high, and chest narrow on the sides, and prominent in front, there is an indication of phthisis, or some other thoracic disease, and in infants of rachitism. When the jugular veins are congested, there is obstruction to the passage of the blood in the lungs, arising from disease of the heart, or large vessels, or lungs. The examination of the external surface of the chest by mensuration, percussion, succussion, or auscultation enables us to detect malformations, tumours, hydrothorax, pneumothorax, &c., and various other maladies in different parts of the body, as will appear by the following description of these means of diagnosis.

Stethoscopic and Morbid Signs furnished by the Respiration.

—When the stethoscope is applied to the chest of a healthy adult, a murmuring sound is heard during each respiration, which is caused by the expansion of the air-cells, and is termed *Respiratory Murmur*. This becomes louder when a greater quantity of air than usual is taken in during inspiration, and is then called *Puerile*, as it exists in children. This is sometimes constitutional with nervous and hysterical persons; and it occurs when a part of one or both lungs is impervious in the healthy part, or in one lung when the functions of the other are annihilated, as in empyema, hydrothorax. The respiratory murmur becomes weak or extinct when the air-tubes in a part are obstructed or constricted by spasm, as in catarrh, asthma, &c., or when any substance, solid, fluid, or gaseous, is interposed between the lung and the chest, or when the lung is hepatized or solidified.

Bronchial respiration is caused by the air passing through the bronchial tubes without entering the minute air-cells, when these are compressed, condensed, or solidified, as in hepatization.

Cavernous respiration is induced by the passage of the air

from the bronchi into large cavities, instead of entering the minute air-cells.

The *crepitous râle* is compared to the crackling or crepitation of salt on live coals, or in a heated vessel, and is caused by the air passing through a fluid in the minute air-cells.

The *mucous râle* is compared to the sound caused by blowing through a pipe into soapy water, and is induced by the passage of the air through a fluid in the bronchial tubes or accidental cavities.

The *sonorous râle* is compared to the sound of cooing or snoring, and is caused by the air passing through the bronchial tubes, whose lining membrane is thickened and rough.

The *sibilous râle* is compared to the sound caused by the sudden separation of two oiled surfaces, and is ascribed to the same condition of mucous membrane in the smaller bronchi as the last.

Respiratory murmur, feeble or extinct, indicates pleuritis, empyema, hydrothorax, pneumonia, œdema, phthisis, vomieæ, pulmonary apoplexy, emphysema, pneumothorax and catarrh.

Bronchial respiration is present in the second stage of pneumonia, first stage of phthisis, and dilated bronchi.

Cavernous respiration is present in tuberculous abscess, pneumonic abscess, and dilated bronchi.

The *crepitous râle* indicates the first stage of pneumonia, œdema, pulmonary apoplexy, and emphysema.

The *mucous râle* is discovered in bronchitis, tuberculous, pneumonic and gangrenous abscesses, and also in bronchial hæmorrhage.

The *sonorous and sibilous râles* are characteristic of bronchitis and emphysema.

Signs furnished by the Voice.—The sound of the voice is scarcely discoverable by the stethoscope in the bronchi of a healthy lung, except under the clavicles and along the spine. The principal modifications of the voice during disease are *bronchophony*, *pectoriloquy*, and *ægophony*.

Bronchophony is heard when the lung is solidified, as in hepatization.

Pectoriloquy is said to exist when the voice is distinctly heard

through the stethoscope applied to the chest, and arises from the reverberation of the voice in a cavity in the parenchyma of the lung communicating with the bronchi.

Ægophony is compared to the echo of the voice, and is present in pleurisy.

Bronchophony indicates the second stage of pneumonia, the first stage of phthisis, and dilated bronchi.

Pectoriloquy is heard in tuberculous, pneumonic, and gangrenous abscesses, and dilated bronchi.

Ægophony is characteristic of pleuritis.

Signs furnished by Percussion.—The sound elicited by percussing or striking the chest is either *clear*, *tympanitic*, or *dull*.

It is *clear* over all the chest, except the regions of the heart and liver, where it is dull, and over the stomach, where it is tympanitic.

It is *tympanitic* when the lung is rarefied, or when air is placed between this organ and the chest, as in emphysema and pneumo-thorax.

It is *dull* when the substance of the lung is infiltrated or solidified, and when there is a substance interposed between the lung and the chest, as in pleuritis, empyema, hydrothorax, pneumonia, œdema, pulmonary apoplexy, vomica, phthisis, and accidental productions of the pleura. Other signs are afforded by the voice and articulation: we observe the patient stammer on the invasion of apoplexy; the voice fail on the approach of death; and in other cases trembling, interrupted, or taciturn; while loquacity combined with delirium, and the entire loss of speech, always manifests violent internal inflammation or compression of the brain.

Succussion, or shaking of the trunk, enables us to detect fluid in the chest, when this cavity is partly filled with air and partly with fluid, as in pleuro-pneumo-thorax.

The stethoscope also enables us to detect deep-seated fractures; or urinary calculus, if the instrument is applied to the sacrum or pubes, we hear a loud and distinct sound when the catheter comes in contact with the stone: hernia, when the bowel passes through the diaphragm into the chest, we

can hear borborygmi distinctly, a fact that enables us to distinguish intestinal from omental hernia: tympanitis, by applying the stethoscope, and using gentle percussion, a sound is heard like that of a drum at a distance: ascites, by the sense of fluctuation being distinctly heard by slight percussion on the opposite side of the abdomen: hydrocele may be detected in the same manner, and distinguished from diseased testis; and, lastly, we can discover the existence of the foetus in utero by hearing the *bruit de soufflet* in the placenta, or the rapid motion of the foetal heart; and also abscesses of the liver and diseases of the ear.

Stethoscopic Signs of the Existence of Utero-gestation.—Foetal pulsations double the maternal not synchronous with these; bellows sound in the placenta; synchronous, with the maternal pulse. Exploration to be made before the sixth month of pregnancy.

Stethoscopic Signs in Fractures.—Crepitation louder in oblique than in transverse; a gurgling noise when effusion exists; sound of many splinters in comminuted fractures, and heard when the cylinder is applied to any bone articulated with the broken one; fracture of the femur even heard upon the cranium (Laennec). Obscure fractures may in general be detected by the stethoscope.

In *Diseases of the Ear* the application of the stethoscope on the mastoid process, or on other cavities of the face, will render the circulation of the air in these cavities audible; and the voice will also be heard to resound through them. This resonance is called *rhinophony*. When one nostril is closed by a finger, and the person blows through the other, the ingress of air into the tympanum will be very evident on applying the stethoscope to the opposite mastoid process. When mucus is in the Eustachian tube or ear, as in coryza, the mucous rhonchus will be heard. Lastly, auscultation will be of great value in veterinary surgery.

Two other means for detecting diseases of the chest are employed—Percussion and Mensuration, or Admeasurement; the value of which must be obvious to every member of the faculty.

Percussion is still a very valuable means of distinguishing diseases. In performing this operation, the fingers are flexed, and their extremities brought together, when they strike the chest perpendicularly, its integuments having been rendered tense by the other hand. The percussion should be made alternately on the corresponding points of the chest. The patient should be erect or sitting, his arms being carried backwards when the anterior part of the chest is examined, elevated towards his head when we explore the sides, and brought across the anterior part of the chest when we percuss the back. The sound will be clear when any part of the chest is struck, which is merely covered by skin. It will be dull over the mammæ in females, the pectoral muscles in the male, and over the heart and liver. It is dull, obscure, or absent, in disease, though sometimes unnaturally clear under the clavicles. The sound is increased when the lungs contain much air, as in pneumothorax. It is dull and obscure in catarrh, œdema of the lungs, and the first stage of pneumonia. It is altogether suppressed in the second stage of pneumonia, when a part of the lung is hepatized and impermeable to air. This happens when the pleura is filled with fluid, or any morbid growth. In abscess of the lung, the sound is increased, and may resemble metallic tinkling. Percussion or palpation is an efficacious mode of ascertaining the existence of abdominal diseases, and is effected by placing a flat piece of ivory, called pleximeter by its inventor, M. Piorry of Paris. Percussion may be immediate or mediate; this is termed *abdomenoscopia*. It enables us to detect the size and dimensions of the liver, gall-bladder, spleen, kidneys, gravid uterus, and bladder. The sound will vary according to the quantity of gas in the intestines, according to the disease and the position of the patient: immediate percussion is now preferred to mediate, it is used in detecting dropsies and abscesses.

Mensuration of the Chest and Abdomen is a valuable means of diagnosis. A tape is applied to the dorsal vertebræ, and passed to the sternum on one side and then on the other. The sides of the chest seldom correspond in dimensions, and if the person examined has pleurisy of one side, then the ca-

capacity may be diminished, while that of the opposite will, in general, be found enlarged; one side of the chest may be dilated when there is fluid, or gaseous secretions, or large tumours. It may be contracted by original conformation. The abdomen is measured during the treatment of ascites.

Succussion or Shaking the Chest will enable us to detect the presence of fluid in that cavity, unless the whole cavity is completely filled. This is a valuable operation in hydrothorax, empyema, and hæmatorax and abdominal dropsy.

Signs or Morbid Indications taken from the Digestive System.—Pain in *mastication* may arise from tooth-ache, inflamed gums, tongue, sore-throat, as in scarlatina, cynanche, aphthæ, cancer of the tongue, cheeks, or fauces, and from neuralgia or rheumatism.

Blackness of the lips, teeth, gums, and tongue, with tremors and fissures of the last, are indicative of dangerous internal inflammations, as those of the intestines, peritoneum; or of typhus. These appearances justify a fatal prognosis. The term *sordes* is applied to the matter on the lips, teeth, &c.

A whitish, yellowish, greyish, or blackish tongue, with its edges red, accompanied by loss of taste and appetite, denote an irritation more or less intense in the stomach. When florid, or when the papillæ project through the fur, according to some there is gastro-mucous enteritis, and according to others, gastro-serous enteritis. In disease of the liver, the tongue is coated with a yellow fur. In disorders of the brain, such as nervous and tremulous delirium, there is a milky fluid or fur on the organ. When the tongue is dry in fever, generally, *but not invariably*, it contra-indicates venesection, opium, and wine. When the organ is dry, unattended by thirst, it is a bad sign in febrile diseases: this condition is often produced in health, by sleeping with the mouth open, and frequently occurs to snuff-takers, especially when intemperate. When the centre of the organ becomes brown and dry, typhus is denoted.

Increase of Appetite is a sign of pregnancy, of diabetes, or of worms in the intestines.

Defect of Appetite, distaste of aliments, difficult digestion, and continued vomiting, indicate gastritis, or cancer of the stomach.

Insatiable Thirst is characteristic of fevers and acute diseases, and absolute want of this sensation may occur in hydrophobia and gastritis.

Difficult Deglutition is a sign of inflammation or ulceration of the throat, of spasm, ulceration, stricture, or imperviousness of the œsophagus, of chorea, hysteria, tetanus, hydrophobia; and, when fluid gurgles in the throat, is an indication of approaching death. When it is preceded by gnashing of the teeth, and inability to move the tongue, it indicates disease of the brain. Pain or tenderness on pressing the epigastrium is a sign of gastric irritation or inflammation.

Constipation or Confinement of the Bowels arises from disorder or disease of the stomach, liver, and other digestive organs; and also from intestinal stricture, intussusception, and hernia.

Diarrhœa arises from irritation or inflammation of the intestines induced by improper food, exposure to cold, repression of eruptions, dentition, or by local injuries.

Appearance of the Fæces.—The fæces may be pale or white from a deficiency of bile, very yellow from an excess of the same fluid, black in some diseases, probably from ulceration, or from the use of chalybeates or sulphur, or from mere retention in the colon, and in such cases probably by the formation of sulphuretted gas; bloody, from ulceration and contra-indicating the use of cathartics; green, from large doses of calomel; like curdled cream from castor oil, and like rice water or thin gruel in malignant cholera. The odour is offensive in ulceration of the bowels, in the last stage of fever, dysentery, diarrhœa, and sometimes in cholera. The fæces may be reduced to small hardened masses or *scybalæ*, which shows their long retention in the colon; or they may be flattened or passed in diminished size, as in prostatic disease, or in stricture of the rectum, and piles.

Flatulence or gas may be secreted in the bowels, as in dyspepsia, tympanites, or in the last stage of typhus, when it

is called *borborygmi*, from the peculiar sound, and also *meteorization*, or *meteorism*.

Nausea or vomiting may depend on disorder of the digestive organs, of the brain, chest, and skin, or any part of the body. In children there is acidity of the alvine evacuations, itching of the extremities of the gastro-intestinal mucous membrane, as at the mouth, lips, nose, and anus, and also of the genito-urinary organs, and eye. This is exemplified in cases of intestinal worms, infantile remittent fever, catarrh, coryza, &c. Tension of the abdomen may be produced by flatus, ascites, enlargement of mesenteric glands, liver, and various other morbid growths, diseased ovaria or uterus, pregnancy, accumulation of fæces, large aneurisms, incurvation of the spine, and tubercular, fungoid, or scirrhus enlargement.

Abdomenoscöpy, or exploration of the abdomen, enables us to detect these various diseases, and this is effected by *inspection*, *manual examination*, and by *percussion*.

Signs or Morbid Indications taken from Secretions.—Organs which afford secretions lose their power for some time when inflamed, as we see exemplified in incipient inflammation of the eye, nose, kidney, &c. To this state succeeds a copious secretion or effusion of fluid, there will be lachrymation, mucous discharge from the nose, increased quantity of urine.

Suppression of urine, if complete, is generally a fatal symptom, especially in the advanced period of fever and in other diseases, and death seems to be induced by apoplexy. Complete suppression has continued for seven weeks, and recovery happened. In fatal cases of fever, there may be no urine in the bladder.

Retention of urine may be caused in disorders of the nervous system, as hysteria, hypochondriasis, &c. This often happens in the last stage of typhus, and the bladder has distended the abdomen so much, that pregnancy was suspected.

Distended bladder is also caused by retroversion of the gravid uterus; the fundus of this organ being depressed under the sacrum. The urine may be deficient in febrile diseases, and especially in dropsy. The average quantity passed daily by healthy individuals is about two pints and a half. This

fluid may be voided in excess in diabetes, to the amount of forty pints, and on the approach of inebriation, in hysteria, and by fear. The latter is well exemplified at the College of Surgeons and Apothecaries' Hall, in part of each mansion, significantly designated "the Funking-room." It is well known to those who have visited this chamber that a certain chamber utensil is very often called into use. Children under the influence of fear have an involuntary evacuation of urine and feces. The colour of the urine is often diagnostic of disease. In inflammatory fever, it is high coloured; in typhus and hysteria, dropsy, and diabetes, it is pale; in obstinate dyspepsia, it deposits a pink or lateritious or white sediment; in disease of the liver, it is red, resembling port wine or porter; in jaundice, it is yellow, and tinges linen of a saffron hue; and in cases of intestinal worms it is often white and milky, as also in certain diseases of the bladder. Excessive doses of the alkaline medicines will produce the same colour. When the urine deposits, after standing for some time, a sediment of a pink colour or resembling brickdust, there is lithic acid present. We observe this in derangements of the digestive organs, in liver complaints, in gout, rheumatism, inflammatory and febrile diseases. If we test the urine in such cases with litmus paper, we shall observe the colour changed to red; when the alkaline salts predominate, the colour of the paper becomes brown. The urine may be mixed with blood: the latter proceeds from the urethra, bladder, ureter, or kidney, and usually accompanies calculus, fungus, or ulceration in some of these organs. The urine may be mixed with mucus, as in catarrhus vesicæ of old people; and it contains albumen in certain forms of dropsy, which is easily detected by heat.

Dysury indicates stricture of the urethra, calculus in the bladder, disease of the prostate gland, disease of the rectum, bladder, vagina, or uterus. It may arise from spasm of the urethra or bladder, and depend upon irritation induced sympathetically by remote or contiguous organs. It may depend on disease in the brain, and what are called anomalous affections. It has supervened during the convalescence after scarlatina, and defied numerous remedies for some days.

Signs or Morbid Indications deduced from Nutrition.—Excessive obesity, combined with difficulty in locomotion, indicates repletion, and proves that the energy of the whole organs has been great; while excessive emaciation is a positive proof of the existence of some chronic disease, as phthisis, tabes mesenterica, &c.

Signs taken from the Temperature of the Body.—In all inflammations there is an increase of temperature in the affected part. This can be ascertained by the touch, but most accurately by a thermometer. In inflammations of important organs, or in continued fevers, the skin, and especially that over the forehead and face, has its temperature increased.

Coldness of the body, rigors, or cold shivering, indicate incipient fever, inflammation, or suppuration. If the coldness comes suddenly and occupies the extremities and the trunk, it indicates approaching death.

Diagnosis deduced from the Difference of Ages.—Inflammations of the brain are most dangerous to infants and to old persons, in consequence of the determination of blood to this organ at both periods of life. Diseases of the chest are most common to adolescents and adults, and to those in advanced life; and inflammations and irritation of the digestive organs are most common in the middle periods of life. These are also very common to infants and children from improper food. Inflammations terminate in children by eruptions on the head or face, or by epistaxis; in adolescents, by hæmoptysis; in adults, by bilious vomiting or diarrhœa; in old people, by mucous discharge from the bladder, or by infiltration of the extremities.

Diagnosis from Temperaments and Constitutions.—Internal inflammations are most dangerous to persons of a sanguine temperament, and of high complexion.

The diseases of the brain and its appendages are most dangerous to persons of the nervous temperament.

Inflammations of the digestive and other abdominal organs are most formidable to those of the bilious temperament. Scrofula, scurvy, and all diseases of debility are most dangerous to those of the lymphatic temperament.

Idiosyncrasies, or peculiar dispositions of individuals to disease, often obscure our diagnosis, prognosis, and treatment. A correct diagnosis is the most important part of pathology; for without knowing the nature of the disease, the treatment cannot be determined. The first question to be determined, in all cases, is, what is the organ affected, and, is the disease functional or structural, or a complication of both. In learning the history of every case, we are in general able to determine the organ affected, and whether the disease is functional, structural, or complicated. It is of the utmost importance to form a correct opinion, as the treatment necessary for functional and structural diseases is diametrically opposite, and if erroneously employed must be productive of great injury and even fatal consequences. In every case we should pursue the following plan in taking the history of the disease. We should consider the age, sex, residence, occupation, habit of body, temperament, state of general health, previous history, and present symptoms. We should next examine the functions of the nervous, circulatory, respiratory, digestive and genito-urinary systems. We should examine the countenance, eyes, tongue, respiration, pulse, condition of the appetite, regularity of the alvine evacuations, condition and colour of the *faeces*, condition of the urine, and uterine secretion in the other sex, and muscular system. We then can form a correct opinion of the nature of the disease, of the general issue, and treatment.

NOSOLOGY, OR CLASSIFICATION OF DISEASES.

Various classifications of diseases have been proposed by writers, but all are liable to objection. Dr. Cullen's is adopted in this work as one of the best. For practical purposes, we may divide diseases or deviations from health into, 1, functional; 2, structural; 3, mechanical; and 4, parasitical. Diseases may be complicated with each other, and comprehend all forms of human infirmity. They are divided into their origin, the moment of invasion, progress, type, simplicity or complication: their characters are modified by the seasons.

With regard to their *origin*, diseases are divided into

hereditary, or those transmitted with life at the moment of conception; *innate*, or those contracted in the uterus after conception; *acquired*, or those contracted after birth. Acquired diseases are divided into *sporadic*, or those which accidentally affect individuals; and *pandemic*, or those resulting from causes that affect a great number of persons at the same time. The last are subdivided into *endemic* and *epidemic*, according as they depend upon permanent, or local and transient causes. All these may be contagious or non-contagious; the first are communicable from one person to another by mediate or immediate contact; the latter are communicable through atmosphere, and are designated infections. With regard to their *invasion*, diseases are divided into *primitive* and *consecutive*;—they are *external* or *internal*, *local* or *general*, when affecting many organs at the same time; *idiopathic* when they continue in the part first affected, *symptomatic* when dependent on another malady, *sympathetic* when deranging organs more or less distant, and *critical* when terminating in health, another disease, or death. A disease is *simple* when it exists alone, *compound* when accompanied by another disease which requires no particular treatment, and *complicated* when combined with one or more diseases which require a different treatment.

GENERAL THERAPEUTICS.

TREATMENT OF DISEASES IN GENERAL.

Three grand powers are employed to prevent and treat diseases; Hygiene, Pharmacy, and Surgery. The curative means are divided into *preservative*, *palliative*, and *radical*.

Hygiene means the regimen of the sick; pharmacy, the preparation of medicinal agents; and surgery comprehends all manual applications to the body. These three means are comprehended in the term Therapeutics.

Hygiene is the most important branch of medicine. It directs us to employ all the means conducive to health, as aliment, exercise, medicines, &c. A proper regimen is of the first importance in the treatment of diseases; it often decides a favourable or unfavourable termination. Tranquillity

of mind, repose of the body, refreshing sleep, bland and easily digested aliments, abstinence from ardent and fermented liquors, regularity of the bowels, skin, and of the different functions, are, in a vast majority of diseases, infinitely more powerful than medicines. The latter, however, are of immense value, and are bounteously afforded from almost every region of the creation, "the air, the earth, and the waters," and are so diversified as to affect and control the functions and diseases of every part of the body. Therapeutic agents have been classed, and the classifications are as numerous as there are writers on the subject. M. Barbier, whose arrangement is one of the best, divides medicines into tonics, excitants, diffusibles, emollients, temperants, narcotics, purgatives, emetics, laxatives; and to those whose operation is unknown, he applies the term *incertæ sedis*.

Medicines are also divided according to their actions upon certain organs, as sternutatories, sialagogues, emetics, purgatives, stomachics, diuretics, emmenagogues, aphrodisiacs, anti-aphrodisiacs, expectorants, sudorifics, anti-emetics, anti-herpetic, anti-psorics, anti-scorbutics, anti-scorfulous, anti-syphilitic, carminatives, vermifuge, febrifuge, anti-spasmodic, &c.

The surgical means are repercuissives, resolvents, emollients, narcotics, rubefacients, vesicants, escharotics, maturatives or suppuratives, detersives: operations, capital and minor; the first comprising the application of ligatures to arteries and veins, amputation, excision, extirpation, laryngotomy, tracheotomy, œsophagotomy, gastrotomy, catheterism, lithotomy, lithotrity, paracentesis, or tapping the abdomen, ehest, tunica vaginalis, ovary, or brain, excision for fistulæ, herniæ, suture, coaptation of fractures, and reduction of dislocations. The second, or minor operations, are extraction of teeth, blood-letting, leeching, cupping, insertion of setons or issues, application of moxa, blisters, cauteries, vaccination, and perforation of the lobe of the ear.

Materia Medica is that branch of medical science which relates to medicines. Medicines are abundantly supplied from the three great kingdoms of nature, the vegetable, the mineral, and the animal. The science which treats of these kingdoms

is natural history, which is subdivided into botany, mineralogy, and zoology. Natural history, though a vast science, is but a division of natural philosophy, which includes the knowledge of all existent beings which are capable of affecting our senses, and embraces 1. physics, or the general laws which govern and maintain the order and harmony of all bodies collectively; 2. chemistry, which explains the elements and proximate principles of bodies, and their action on each other; 3. anatomy and physiology, which explain the structure and functions of all living beings; and 4. astronomy, or the study of the immense bodies placed above the earth and the atmosphere.

It may be stated, that the earth and its innumerable productions, those on its surface and in its substance, the ocean, the atmosphere, and the innumerable objects these contain, contribute largely to our therapeutical agents, or to the *materia medica*. The *materia medica* is supplied from every range of the creation, and extends from matter to space. The objects which engage the attention of the therapist are, the properties of the sun, moon, and heavenly bodies, the laws of their uninterrupted revolutions, and various movements; their influences on climate, situation, and human health; the various productions of the earth and the waters, and the microcosm of the human body, with its wonderful organs, functions, immaterial principle, innumerable derangements, and remedies. Though there are “a thousand species of diseases, there are a thousand species of remedies.” The last are derived from the organic and inorganic kingdoms of nature, but by far the greatest number are of vegetable origin—few of animal or mineral.

The distribution of all bodies into three kingdoms very much facilitates the study of nature, and more especially as the productions of each kingdom have been subdivided into classes, orders, genera, species, and varieties. “A medicine,” says Galen, “is that which can alter our nature, and from a preternatural, reduce it to a natural condition.” All medicines are derived from the ultimate principles and elements of vegetables, animals, and minerals. They are procured from the roots, woods, barks, leaves, flowers, seeds,

fruits, gums, resins, and juices of vegetables, from different parts of animals, and from earths, metals, and minerals; and all are subjected to various modes of preparation by the apothecary; such as oils, distilled waters, infusions, decoctions, extracts, mixtures, spirits, tinctures, wines, vinegars, syrups, confections, powders, pills, plasters, cerates, ointments, liniments, and cataplasms. The physical properties of medicines will not always enable us to judge of their action, though in many instances, especially in the vegetable kingdom, the colour, odour, and taste will furnish us with a correct idea of their effects. This last position may be illustrated by a few examples. It is well known that plants whose flowers are *white* seldom possess active properties; those whose colour is *yellow* are generally endowed with active principles, as the bitter, such as gentian, calumba, gamboge, colocynth, &c.; those of a *red* colour are acid and astringent, such as red roses, rhatany, strawberry-roots, &c.; those of a *brown* colour are astringent and tonic, such as cinchona, catechu, kino, &c.; those of a *green* colour are sharp and acid; those of a *blue* are alkaline, but if this tint is deep or glaucous, the plants are often poisonous, though there are exceptions, as in the black grape and plum. The *black* colour of plants or flowers indicates a highly poisonous property, as exemplified by belladonna, hyosciamus, &c. There are numerous exceptions, however, to the indications afforded by the colour of plants alone. Neither can the sense of taste be depended upon, though it often affords indications of the properties of remedies. The *salt taste* is common to vegetables which grow on the sea-shore, and contain a large portion of saline ingredients. The *acid* taste is peculiar to many medicines, vegetable, mineral, and animal, the mineral acids being the most powerful. The *caustic* taste is also common to various productions of the three great kingdoms of nature, as acids, alkalies, lytta, &c. The *acrid* taste is peculiar to many remedies, and also the *astringent* or *styptic*, as alum, salts of copper, iron, &c. The *bitter* taste indicates tonic, though there are exceptions, as aloes, colocynth, and nuxvomica. The *hot* taste distinguishes aromatics and spices,

and indicates the existence of essential oil. The *nauseous* taste belongs to poisonous remedies, though sometimes to purgatives. The *mucilaginous* taste characterises nutritious substances, and indicates the presence of *fæcula* and *albumen*. The *saccharine* taste belongs to many substances, as vegetable, mineral, and animal.

The sense of smell is also employed in discovering the properties of medicines. The *aromatic* odour is peculiar to species which contain essential or volatile oils, but capsicum is an exception. The *fætid* odour characterizes antispasmodics; the *virose* odour indicates poisons. There is an important fact with respect to odours which deserves recollection, which is, when certain medicines have lost their peculiar odour, they become inert and useless.

The botanical characters of plants indicate their therapeutical properties, as in general those of the same family possess a similar mode of action on the animal economy. It may be mentioned that the cruciferae contain an acrid volatile oil, which is useful in scorbutic and atonic diseases; the labiatæ possess an aromatic essential oil and extractive principle; the solanaceæ are narcotic; the euphorbiaceæ are acrid and purgative; the umbellatæ and cruciferae, are distinguished by peculiar properties; the rubiaceæ are generally tonic, though some are emetic, as ipecacuanha.

All substances in the *materia medica*, and indeed in nature, are either simple or compound; the simple are homogenous, the compound heterogeneous, and composed of several elements.

Chemistry has enabled us to detect fifty simple substances; viz. oxygen, hydrogen, boron, carbon, phosphorus, sulphur, silenium, iodine, chlorine, nitrogen, and forty metals, which are arranged under classes according to their affinity for oxygen. Ten of these substances are employed in medicine, and all may be changed in the human body, or enter into new combinations before they can act on the economy. Compound substances are divided into two great classes, organic and inorganic; the former embraces the animal and vegetable, and the latter the mineral medicines. Simple substances, when

combined, form inorganic compounds; while organic substances contain but a few elementary principles. In proof of this point, it may be observed that nearly all vegetables are composed of oxygen, hydrogen, and carbon; while most animal substances contain these with nitrogen, and even small portions of iron, sulphur, phosphorus, &c. These are designated elementary, and proximate principles. The compound substances employed in medicine are the acids, metallic oxides, sulphurets, chlorides, and salts. The proximate principles of vegetable and animal substances are acid, alkaline, or neutral.

Medicines are combined to obtain various objects or ends: 1. to increase the action of the principal substance; 2. to lessen the action of a remedy when too violent or irritating, and to avoid certain effects, which would defeat the objects we have in view; 3. to obtain at the same time the effects of two or more remedies; 4. to form a compound, which will possess different effects from those of any of the ingredients.

As a general rule, we avoid prescribing medicines which decompose or neutralize each other, though there are many exceptions to this rule; for example, the combination of acetate of lead with opium, of hydrocyanic acid with neutral salts, of iodine with bitter infusions, are all unchemical, but their medicinal effects are most valuable.

Medicines are prepared for use in the pharmaceutical laboratory, and are kept in certain forms called officinal preparations, as prescribed by the directions of the College of Physicians in their Pharmacopœia. Physicians may, however, employ other combinations in their prescriptions, and these are called extemporaneous, or magistral preparations. There are certain abbreviations, by initial letters and marks, employed by the faculty in prescriptions, for despatch and convenience, which express the quantities and doses by conventional terms. These marks closely resemble each other, and often occasion fatal mistakes, as the preparation of prescriptions is in general most improperly entrusted to apprentices. The marks for a drachm and for an ounce bear a close resemblance, and when written in haste are easily mistaken. The Dublin College of Physicians command their members to write the

names and quantities of medicines in full. There is another feature in the laws relating to pharmacy in Ireland of deep importance, which is, that poisons cannot be sold to persons indiscriminately applying for them. The want of such a law in this country is too well known to require further notice on this occasion. Physicians' prescriptions are written in Latin, lest patients should be alarmed, if they knew the names of many medicines ordered for them, such as arsenic, prussic acid, hemlock, nux vomica, &c.

The limits by which I am circumscribed for the execution of this work will not allow me to notice the methods of collecting, selecting, preparing, and preserving medicines, or in other words, to describe the science and art of pharmacy; but this may be learned from any of our admirable dispensatories. It is right to mention, that the general principles upon which the collection and preparation of medicines should be made, constitute the science, and the various operations, founded on those principles, constitute the art of the apothecary.

Some of our medicines act on particular organs, as on the brain, heart, stomach, intestinal canal, &c.; and the *materia medica* is classed accordingly, as emetics, purgatives, sudorifies, &c. while others supposed medicines to have specific effects on diseases, and hence arose the terms febrifuge, antiscorbutic, anti-scorfulous, &c. It is now generally admitted, that the only rational classification of remedies must be based upon the changes, effects, or results, which medicines produce upon the natural functions or actions of different organs. This is what is called the physiological effect of medicine. The action of remedies is either local or general.

The local action is that which occurs in the tissue to which the medicine is applied; the general action occurs when the whole organs are affected. A vast number of remedies act first through the nerves of the part, as when spirituous liquids or narcotics are taken into the stomach. The first impression is made on the nerves, which convey it to the brain, and thence it is reflected to every organ in the body. It is proved by anatomy, that every part of the body is supplied with nerves, through the cerebro-spinal system, and that all parts sym-

pathise with each other, but in different degrees. These sympathies are great between the brain and organs of sense, as the eye, nose, tongue, ear; also between the brain and stomach; between the latter and the heart, lungs, kidneys, and generative organs. Thus it is, that increased sensibility in one organ will diminish the function in another, which strongly sympathises with it. This universal nervous connexion explains all symptoms and regulates the effects of remedies. The anatomist who knows the proximity of the origin of the nerves of vision, smell, taste, and hearing, can readily understand the reason of sympathy between all the organs which perform these functions. Thus he explains the reason why the sight of agreeable food increases the saliva, or the sound of the culinary process for its preparation acting on the auditory nerves produces the same effects; and how the sight or smell of a disagreeable object will cause nausea or vomiting, or an unpleasant sound cause pain in the teeth, or tooth-ache cause ear-ache, or an unpleasant odour induce head-ache, and so on. It is in consequence of sympathy that neuralgia of the face or tic-douloureux will cause head-ache or want of sleep, loss of appetite, impeded respiration, and general disturbance throughout the body. Hence it is that pain or disorder of one organ will affect another at a distance, and frequently throw all parts into a deranged condition. A slight puncture of the finger may induce tetanus or universal spasm, and also derangement in every part of the body. This doctrine might be illustrated by thousands of examples. It is by this principle that nature endeavours to rid herself of morbid actions or causes of disease; and the art of exciting and directing this principle, furnishes the most important doctrines in the practice of medicine. It is necessary to increase or diminish the intensity or force of sympathy, and to excite it when nature is overpowered by disease, and incapable of reaction. In our treatment of diseases, we direct our remedies to those organs which sympathize most with the affected part. As the digestive organs, which include all the abdominal viscera, strongly sympathize with each other, with the brain, organs of sense, respiration, and circulation, we find that by exciting the sensibility or increasing the function of the digestive tube, we direct nervous

power thereto and diminish it in all other parts. Thus we exhibit purgatives in a vast number of diseases of the brain, eye, &c. and remove these diseases, though the chief effect of the remedy was on the intestines. It is by inducing counteraction, or counter-irritation in healthy organs, that we relieve or remove diseases in remote though sympathizing parts.

The splendid physiological discoveries of Sir Charles Bell have elucidated the functions of the nervous system, and confirmed the doctrine of sympathy, which was in some measure obscure before the publication of his opinions.

All our remedial measures may be divided into two great classes; 1. those that diminish nervous power or sensibility, which enables organs to perform their functions, and these are called sedatives or depriments; 2. those which increase nervous power, sensibility, or the natural function of parts, and these are called stimuli or excitants. In the immense number of painful disorders we find efficient aid in the internal and external use of sedatives; and we shall find upon reflection, that the greater portion of our remedies, such as purgatives, emetics, sudorifics, diuretics, errhines, expectorants, &c. are counter-irritants or excitants. Medicines act on the parts to which they are applied, and these are the stomach and intestines, the skin, the surface of the eyes, nostrils, auditory and air passages, the urethra and bladder, the uterus and vagina. Medicines act on the living body, 1. by the direct impression on the organs to which they are applied; 2. by their molecules being absorbed into the mass of blood; 3. by sympathy; 4. by contiguity of organs; and 5. by revulsion.

The *direct* action of medicines is illustrated by the application of collyria to the eye, or caustic to the skin. The *absorption of particles, their admixture with the blood, and their distribution to all tissues or structures*, is proved beyond doubt, by their detection in different parts. Magendie, Tiedmann, and Gmelin, have detected the odours of alcohol, camphor, and musk, in the blood of animals to which they had administered these substances. The bitterness of wormwood is detected in the milk of animals that eat it, and the purgative

taken by a nurse will affect the infant through her milk. Vavasseur and Edwards have demonstrated the presence of the molecules of remedies in the cellular tissue, and in the parenchyma of every organ in the body, and their particles are excreted by the pulmonary or eutaneous transpiration, and by the urinary secretion. An animal fed with madder will have its bones tinged with the colour of this substance. The *sympathetic* action of medicine can be readily illustrated. The remedy is applied to the part, the nerves convey the impression to the brain, and thence it is reflected all over the body. Medicines act by contiguity; as in inflammations of the abdominal viscera, we find fomentations not only relax the integuments, but often mitigate the deep-seated pain. It is upon this principle that we apply ointments and cataplasms over tumours, enlarged glands, &c. We also know that by irritating the extremity of a duct or passage, for example, the canal common to the liver and gall-bladder (ductus communis choledochus) we excite the liver to act more energetically. We therefore find that a purgative which irritates the extremity of this duct in the first portion of the intestinal canal (duodenum) will stimulate the liver, and excite it to secrete more abundantly. The action of medicines by *revulsion* is exemplified in the following manner:—When an irritant is applied to any part, it excites the sensibility or supply of nervous power, as also the afflux of blood in that part; and consequently lessens both in contiguous organs. In this way the application of blisters, sinapisms, or rubefacients are highly valuable in deep-seated inflammations, as those of the head, chest, or abdomen. On this principle purgatives, by setting up an artificial disorder in the intestines, will relieve affections of the head, chest, abdomen, and extremities. Those remedies which act on the eutaneous vessels, and on the kidneys and uterus, produce their effects upon the same principle.

The effects of medicines are of two kinds:—1. the *immediate or physiological*; 2. the *secondary or therapeutical*. The physiological effect is produced by the changes that take place in the function or natural action of the part to which a medicine is applied; and is the direct impression made on the body, whether through the nerves or the absorbents.

The therapeutical effects are those salutary changes which take place in the functions of the different organs, by which disorder is alleviated or removed. The immediate effects of medicine influence all parts of the body, whether solid or fluid, in consequence of the universal sympathy, or nervous connexion of the whole, and also by the passage of the medicine into the blood.

In order to ascertain the medicinal properties of each substance, we must carefully observe the modifications produced in the function of each organ. This constitutes the *physiological effects* of medicines, and these are either *local* or *general*. Thus some medicines act on the functions of digestion, circulation, respiration, secretion, and modify them; and it is upon these modifications that the curative effects mainly depend. Happily for humanity, we possess great dominion over the animal economy, in regulating and modifying its functions. "When we consider," says Dr. Spillan, in his excellent supplement to the Pharmacopœias, "the power which medicinal agents possess over the animal economy, we have sufficient reason to be surprised both at its extent and its importance. By means of it the physician appears to have all the organs of the body and their respective functions under his control. Through it he possesses manifold and valuable resources, by which, if he cannot always destroy the causes of disease, he can frequently attack morbid lesions with success, combat the prevailing symptoms which threaten to prove fatal, and, by opposing a medicinal to a pathological disturbance, arrest the further progress of disease."

It is now the universal opinion that medicines do not possess specific properties distinct from their physiological effects, and to which their curative effects can be ascribed. Hence we now write upon the nature and treatment, not the cure of diseases, as the latter is an indirect consequence of the immediate or physiological effects of medicines upon the system. It is very much doubted whether we possess a single specific remedy; and the faculty having abandoned this pretension, myriads of empirics proclaim their infallible cures for incurable diseases. "This, I apprehend," says Sir Gilbert Blane, "is so well understood among well-educated physi-

eians, that the word *cure*, as applied to their own merits, is proscribed as presumptuous."—*Medical Logic*, p. 259.

Such is the opinion of one of the most humane and scientific physicians of which this country can boast—of a physieian whose classical and able works are an honour to our medical literature, and whose employment of vegetable remedies has effected a complete revolution in naval medicine. Every one who is acquainted with the naval history of this country must reflect, with deep regret, on the great mortality of seamen during the commencement of the last century, at which time our fleet could not keep the ocean for more than ten weeks, without being rendered unserviceable by scurvy, and our national protection was rendered extremely feeble. In the year 1780, Sir Gilbert Blane, Bart. distributed among flag officers and captains an unpublished tract, on the improvement of the moral and physical condition of seamen. This essay was well received, and by no individual so favourably as by our most gracious and beloved sovereign, who was then at New York. In the following year this tract effected a total change in the state of health of seamen, by the introduction of the juice of lemons or limes, which completely prevented scurvy, and enabled the wooden walls of England to rule the waves at all seasons, in all climates, and for an indefinite length of time. Such are a few of the benefits conferred on science and humanity by this revered physieian, and by means of vegetable remedies.

Medicines may be conveyed undecomposed into the circulation, either through the intestinal absorbents, the lungs, or the skin, and influence the general system. They may be decomposed in the stomach, blood, or secreting organs, and yet produce effects. They may combine chemically with the contents of the stomach, or intestines, or with the substance of the body itself. They act upon all the organs, and modify all the functions in health and disease. But they have no specific influence in the cure of diseases. The effects of medicines on the body are modified by age, sex, habit, temperament, climate, influence of the mind and passions, and the period of disease.

NOSOGRAPHY,

OR

PRACTICE OF MEDICINE.

IN this country the Cullenian description of diseases is almost universally adopted, on account of the fidelity and accuracy with which its author has graphically given his definitions. These definitions are, in general, unequalled. But the complication of symptoms excited through the medium of sympathy is illimitable, and hence we can never meet with diseases as described in books or lectures, though we can distinguish in general the leading signs of each. It is this complication that confounds those unacquainted with science, when they refer to popular works on medicine.

The diseases are arranged, with very few exceptions, as in Dr. Cullen's *Nosologia Methodica*, in which there are four

CLASSES.

- | | |
|--------------|---------------------|
| 1. PYREXIÆ. | FEBRILE DISEASES. |
| 2. NEUROSES. | NERVOUS DISEASES. |
| 3. CACHEXIÆ. | CACHECTIC DISEASES. |
| 4. LOCALES. | LOCAL DISEASES. |

CLASS I.

PYREXIÆ;

OR,

FEBRILE DISEASES.

CHARACTER.

Increased heat and frequency of pulse after a shivering accompanied with a disturbance in many of the functions, and diminution of strength, especially in the limbs.

ORDERS:

FEBRES.	FEVERS.
EXANTHEMATA.	ERUPTIVE FEVERS.
PHLEGMASÆ.	INFLAMMATIONS.
HÆMORRHAGIÆ.	HÆMORRHAGES.
PROFLUVIA.	FLUXES.

ORDER I.

FEBRES. FEVERS.

CHARACTER.

Pyrexia, without any primary local affection, preceded by languor, lassitude, and other symptoms of debility.

The order Febres is divided into Continued and Intermittent, and Remittent Fevers.

GENERA.

Continued Fevers.

- | | |
|--------------|---------------------|
| 1. SYNOCHA. | INFLAMMATORY FEVER. |
| 2. TYPHUS. | NERVOUS FEVER. |
| 3. SYNOCHUS. | MIXED FEVER. |

Intermittent Fevers.

- | | |
|----------------|------------------|
| 1. QUOTIDIANA. | EVERY-DAY AGUE. |
| 2. TERTIANA. | THIRD-DAY AGUE. |
| 3. QUARTANA. | FOURTH-DAY AGUE. |

Continued Fevers.

SYNOCHA.—INFLAMMATORY FEVER.

GENERIC CHARACTER.—A steady and great increase of heat; pulse strong, large, and frequent; urine high-coloured, and deposits a red sediment; the functions of the mind not disturbed; no diminution of muscular power.

SYMPTOMS.—Lassitude and general anxiety, succeeded by rigors, alternating with transient flushes, and terminating in a violent and continued heat; the countenance is flushed; there is [pulsation of the temporal and carotid arteries, intolerance of light and sound, great sense of weight in the head,] a suffused redness of the eyes and skin generally; the pulse is frequent, strong, and regular; great thirst; white tongue; scanty and high-coloured urine, depositing a red sediment; costiveness; morbid sensibility, and intolerance of usual impressions; hurried respiration; extreme anxiety; [dull pains in the limbs; an exacerbation in the evening, or at night; as the disease advances the skin becomes hot, the tongue dry, or covered with a brownish crust; there is delirium and great debility at the approach of death.]

CAUSES.—*Predisposing.*—Plethoric habit of body, with a strong muscular system, a good and unimpaired constitution.

Exciting.—Sudden alternations of temperature, as the application of cold to a heated body; violent exercise, intemperance; the suppression of usual evacuations; repulsion of eruptions; strong passions of the mind; the too free use of vinous or spirituous liquors.

DIAGNOSIS.—*From Typhus.*—By the more sudden accession of the disease, by its arising from the common causes above enumerated, and not from contagion; by the *strength* and *hardness* of the pulse; the *whiteness* of the tongue; by the *high* colour of the urine, and its affording the lateritious sediment.

PROGNOSIS.—*Favourable Symptoms.*—About the seventh day a moisture appearing upon the skin, succeeded by an universal and natural perspiration; hæmorrhage from the nose; the appearance of scabby eruptions about the mouth

and ears; suppuration of glandular parts; the formation of abscesses; diarrhoea; the urine depositing a furfuraceous or lateritious sediment; diminished sensibility: the pulse more slow and soft.

Unfavourable Symptoms.—Intense pain in the head, with ferocious delirium; extremely laborious respiration; strong, hard pulse, and other symptoms indicating excessive action; by the inordinacy of which the disease usually proves fatal; or by a determination to internal organs, when the disease ceases to be synocha, and runs into phrenitis, pneumonitis, hepatitis, or an inflammation of some other viscus; picking the bed clothes; hiccup; subsultus tendinum; involuntary evacuations. [Recovery may happen under all these circumstances.]

Morbid Appearances.—On autopsy examination, we discover traces of inflammation in some of the principal organs.]

TREATMENT.—*Indication.*—To lower excessive action.

1. By diminishing or removing certain natural impressions, which in the febrile state become morbid stimuli; such are impressions upon the senses, stimulating operations of the mind, aliment, the effects of motion, the contents of the intestinal canal, sound.

2. By diminishing the quantity of the circulating fluids, and lowering the tone of the vascular system: this is to be effected by bleeding, purging, laxative elysters, diaphoretics.

Mittatur sanguis e brachio ad $\frac{3}{4}$ x, et repetatur pro re nata.

At the commencement a copious and rapid evacuation of blood is absolutely necessary, and subsequent smaller bleedings are to be instituted according to the strength and hardness of the pulse and the urgency of the symptoms. Leeches are occasionally to be applied to the temples, and blood taken away by cupping between the shoulders. [The rule with regard to venesection in this and all cases is, that we should be guided by the effect and not by the quantity of blood abstracted, and therefore we can never prescribe the exact amount to be taken. One person will faint on the removal of $\frac{3}{4}$ vj., and another will bear the loss of $\frac{3}{4}$ lx. Whenever blood-letting is required, a free orifice should be made in the vein, and we must be guided alone by effect, and not by the quantity.]

HAUSTUS PURGANTES SALINI.

Saline purging Draughts.

R. Magnesiae sulphatis ʒiv ;
 Infusi sennae f. ʒxiij ;
 Syrupi aurantii f. ʒj ;

Fiat haustus purgans.

R. Sodae sulphatis ʒiv ;
 Infusi sennae f. ʒxiij ;
 Syrupi aurantii f. ʒj ;

Fiat haustus purgans.

The common black dose, which should be kept ready prepared in every shop, differs very little from the above, and is as follows :—

R. Magnesiae sulphatis ʒiv ;
 Infusi sennae f. ʒxiij ;
 Tinctura ejusdem f. ʒjss ;
 Syrupi zingiberis f. ʒj ;
 Spiritus ammoniae compositi ℥ xx ;

Fiat haustus.

The following white dose is equally efficacious.

R. Magnesiae carbonatis ʒj ;
 ————— sulphatis ʒij ;
 Succo limonis recentis f. ʒij ;
 Syrupi limonis f. ʒj ;
 Aquae menthae viridis f. ʒx ;

Misce pro haustu cathartico.

R. Potassae tartratis ʒj ;
 Infusi sennae f. ʒxiij ;
 Syrupi aurantii f. ʒj ;

Fiat haustus purgans.

PULVERES PURGANTES COMMUNES.

Common purging Powders.

R. Pulveris rhei gr. xxv ;
 [———— cinnamomi compositi gr. v ;]
 Potassae supertartratis ʒj ;

Fiat pulvis ex quovis vehiculo crasso capiendus.

R. Pulveris jalapae ʒj ;
 [———— zinziberis gr. vj ;]
 Potassae supertartratis ʒj ;

Fiat pulvis ex syrupo sumendus.

R. Potassæ sulphatis ʒʒ;
 Pulveris rhei ʒj;
 [—— capsici gr. ii;]
 Fiat pulvis ex syrupo limonis capiendus.

PULVERES DIAPHORETICI SALINI.

Saline sudorific Powders.

R. Pulveris antimonialis gr. iv;
 Potassæ supertartratis gr. vj;
 Fiat pulvis ex syrupo sumendus.

R. Pulveris antimonialis gr. iv;
 Potassæ nitratis gr. v;
 Fiat pulvis ex quovis vehiculo crasso sumendus.

HAUSTUS SALINI COMMUNES.

Common saline Draughts.

R. Potassæ subcarbonatis ʒj;
 Succī limonis recentis quantum sufficit ad perfectam saturationem alkali;
 Aquæ cinnamomi f. ʒij;
 —— destillatæ f. ʒviij;
 Syrupi aurantii f. ʒj;
 Misce pro haustu.

R. Sodæ subcarbonatis ʒj;
 Succī limonis recentis q. s. ad alkali saturationem;
 Aquæ cinnamomi f. ʒiij;
 —— destillatæ f. ʒviij;
 Fiat haustus.

R. Liqueoris ammoniæ acetatis f. ʒiij;
 Aquæ destillatæ f. ʒx;
 Potassæ nitratis gr. x;
 Syrupi aurantii f. ʒj;
 Fiat haustus.

R. Potassæ supertartratis gr. xv;
 Sodæ boratis ʒʒ;
 Aquæ cinnamomi f. ʒiij;
 —— destillatæ f. ʒxj;
 [olei menthæ piperitæ mʒ;]
 Fiat haustus.

One or other of these draughts or powders should be ex-

hibited every four or six hours ; and if no perspiration be produced, a powder and draught should be given together.

MISTURÆ DIAPHORETICÆ.

Sudorific Mixtures.

R. Liquoris antimonii tartarizati f. ʒfs ;
Potassæ nitratis ʒij ;
Aquæ menthæ viridis f. ʒvj ;
Syrupi rosæ f. ʒfs ;

Fiat mistura, cujus capiat æger cochlearia tria magna tertiâ vel quartâ quaque horâ.

R. Liquoris ammoniæ acetatis f. ʒjfs ;
Potassæ nitratis ʒjfs ;
Misturæ camphoræ f. ʒvj ;
Syrupi rosæ f. ʒfs ;

Fiat mistura ; sit dosis cochlearia tria magna tertiâ vel quartâ quaque horâ.

R. Sodæ subcarbonatis ʒj ;
Succi limonis recentis q. s. ad alkali saturationem ;
Misturæ camphoræ f. ʒvj ;
Potassæ nitratis ʒjfs ;
Syrupi rhæados f. ʒiij ;

Fiat mistura, cujus capiantur cochlearia tria magna quartâ quaque horâ.

For a common drink, the patient may have one of the following :—

The acidulated soda-water, after the fixed air has escaped.

The infusum rosæ, diluted with balm-tea, imperial, lemonade, [or barley water acidulated with lemon-juice or vinegar.]

IMPERIAL DRINK.

R. Potassæ supertartratis ʒfs ;
Sacchari purificati ʒiv ;
Corticis aurantii recentis ʒiij ;
Aquæ ferventis Oij ;

Misce pro potu ordinario.

A drachm of nitrate of potass may be added with advantage.

[The patient may use cold water as drink, when he prefers it.]

LEMONADE.

R. Succi limonis recentis f. $\bar{3}$ iiij;
 Corticis limonis recentis $\bar{3}$ l̄s;
 Sacchari purificati $\bar{3}$ iv;
 Aquæ ferventis Oiiij;

Misce pro potu communi.

Also,

R. Syrupi limonis f. $\bar{3}$ iiij;
 Aquæ destillatæ Oj̄l̄s;

Misce.

The nitrate of potass is also a very useful addition to these, in the proportion of two scruples to a quart.

3. By abstracting heat; by cool air; sprinkling the floor of the room with vinegar and water; agitating the surrounding atmosphere; regulation of clothing; occasionally removing the bed-clothes, or taking the patient out of bed; by frequent draughts of cold acidulated liquors or of common water; by the affusion of cold or tepid water; or by sponging the body with a mixture of vinegar and water, [with a little ardent spirit,] when the heat of the body is *above* the natural standard, and when there is no general or profuse perspiration. See the observations on ablution, as in synochus.

If there is delirium, or determination to any viscus, topical bleeding, blisters, fomentations, pediluvium, and the treatment elsewhere laid down for the inflammation of the organ affected.

If the pulse sinks and the extremities become cold, sinapisms to the feet, cordials, especially camphor and æther.

R. Misturæ camphoræ f. $\bar{3}$ vj;
 Spiritus ætheris sulphurici compositi f. $\bar{3}$ l̄s;
 ——— ammoniæ compositi f. $\bar{3}$ j;
 Syrupi aurantii f. $\bar{3}$ iv;

Misce. Cujus capiat æger cochlearia duo magna in horas.

[The treatment under such circumstances should be similar to that for the last stage of synochus; or for typhus gravior. Pure synocha is seldom seen in this country.]

TYPHUS.—NERVOUS FEVER.

GENERIC CHARACTER.—Contagious pyrexia; heat but little increased; pulse weak and small, and in general frequent; urine little changed; the animal functions much disturbed; great prostration of strength.

In general the heat is but little increased; but in some cases of typhus the heat is great and peculiar, leaving an unpleasant penetrating sting or heat on the fingers.

Species.

- | | |
|------------------------------|------------------------|
| 1. <i>Typhus mitior</i> , | The low nervous fever. |
| 2. <i>Typhus gravior</i> , | The putrid fever. |
| 3. <i>Typhus icterodes</i> ? | The yellow fever. |

TYPHUS MITIOR. NERVOUS FEVER.

SYMPTOMS.—General languor and lassitude [with reluctance to motion]; dejection of mind; loss of appetite; alternate chilliness and flushing; dulness and confusion of thought; in a few days giddiness and pain in the head, with aching pains over the whole body; nausea and vomiting; short, anxious respiration; frequent, weak, and often intermittent pulse; at first the tongue is moist and covered with a whitish mucus, but afterwards becomes dry, brown, and tremulous; there is little thirst; the urine is pale and watery; low, muttering delirium, arising from the torpid state of the sensorium, inducing indistinct or ill-associated ideas.

As the disease advances, the heat often becomes very great, rising several degrees above the healthy standard; the tongue dry and brown or morbidly red; [drowsiness, frightful dreams, eyes contorted, answers slowly given;] delirium, now from determination of blood to the head, indicated by the suffused redness of the eyes, the flushed countenance, the throbbing of the temporal arteries; [pulse intermittent or irregular;] scanty, high-coloured, and fœtid urine; sometimes a disposition to immoderate sweating; diarrhœa; subsultus tendinum, coma, involuntary excretions, cold extremities, convulsions, death.

CAUSES.—*Predisposing*.—Weak and delicate habit of body, accompanied with much sensibility and irritability; studious and sedentary life; depressing passions of the mind; poor living; too free indulgence in the use of enervating liquors; excess in venery; profuse evacuations; warmth of climate.

Exciting.—Intemperance; exposure to cold united with moisture; grief, fear, anxiety; those causes which in constitutions so predisposed would induce synocha; contagion.

DIAGNOSIS.—*From typhus gravior*.—At the commencement, by the attack being more gradual, and the symptoms much more mild (vide *Typhus gravior*).—In the progress of the disease, by the absence of those symptoms of putrescency enumerated in typhus gravior, and by its being accompanied with less heat and thirst, less frequency of pulse, and no bilious vomitings.

PROGNOSIS.—*Favourable Symptoms*.—About the seventh, fourteenth, or twenty-first day, the tongue peeling and becoming moist, first at its edges, afterwards on the surface; a moisture breaking out upon the skin; a gentle diarrhœa; salivation (not unfrequently accompanied with aphthæ, which, if they be of a light colour, are not unfavourable, and the contrary); the pulse becoming fuller and more slow; the cessation of delirium, with some return of sleep and appetite; the appearance of scabby eruptions about the mouth, or of phlegmonous tumours in different parts of the body; the urine increasing in quantity, and depositing a sediment.

Unfavourable Circumstances.—All those indicating extreme debility; as diminished energy of the brain, marked by a continued state of insensibility or confusion of intellects, with low, muttering delirium; muscular debility, indicated by the presence of convulsions, subsultus tendinum, tremulous motion of the lips, tongue, and other parts; impeded deglutition; by the patient lying prostrate on his back with extended arms, or insensibly gliding down to the bottom of the bed; falling of the lower jaw; involuntary evacuations; small, rapid, intermittent pulse; hiccup; partial sweating about the breast and head; a peculiar yet indescribable expression of anguish

in the countenance; picking of the bed-clothes; eatching at imaginary objects in the air. [All these symptoms may occur, and recovery happen; but in general they are fatal.]

[*Morbid Appearances*.—In simple or mild typhus there is no morbid alteration discoverable on necrotomic examination.]

TREATMENT.—*Indications*.—I. To excite a new and general action in the system, and thereby to check or moderate the effects of the morbid impression made by the cause of the disease.

II. To support the strength of the patient, where the fulfilment of the first indication has been found impracticable.

The *first indication* is to be attempted by the operation of an emetic administered at the commencement of the disease—[a purgative is now generally preferred]; by diaphoretics; by cold affusion or ablution, which, it must be remembered, is admissible *only when the hot stage is fully formed; when there is no sense of chilliness present; when the heat of the surface of the body is steadily above the natural standard*, [which is to be ascertained by a thermometer, when convenient]; and when there is *no general or profuse perspiration*. For this purpose, sea-water or very dilute acetous acid, in the proportion of one pint of common vinegar to five of water, may be used. Or the body may be sponged with the following lotion:

R. Aquæ puræ f. ℥xxx;
Acidi muriatici,
—— nitrici, āā f. ℥ij;

Misce pro lotionē subinde applicanda.

[Free ventilation is one of the best modes of applying cold.]

The practice of taking away blood in cases of pure typhus is highly improper, and often productive of many bad consequences. It is very likely that the cases said to be benefited by it were cases of synochus or mixed fever.—See Synochus icterodes, [Typhus Gravior, p. 90, and Synochus, with cerebral, thoracic, and abdominal inflammations.]

[PULVIS EMETICUS COMMUNIS.

A common emetic Powder.

R. Pulveris ippecacuanhæ gr. xv ;
 Antimonii tartarizati, gr. i ;
 Fiat pulvis ex pauxillo alicujus liquoris idonei hauriatur ;
 et vomitu moto, superbibantur cyathi aliquot infusi
 anthemidis tepidi.

Or,

HAUSTUS EMETICUS COMMUNIS.

A common emetic Draught.

R. Pulveris ippecacuanhæ gr. xv ;
 Antimonii tartarizati gr. i ;
 Aquæ menthæ viridis f. 5xij ;
 Syrupi croci f. 3j ;
 Fiat haustus emeticus.]

Or,

R. Liquoris antimonii tartarizati 3j ;
 Magnesiæ sulphatis 3j ;
 Aquæ menthæ viridis f. 3vss ;
 Syrupi aurantii f. 3ss ;
 Fiat mistura, de qua capiat æger cochlearia tria magna
 horis alternis donec adsit catharsis.

The diaphoretics which occasionally check this fever at the
 beginning are,

R. Liquoris ammoniæ acetatis f. 5iij ;
 Misturæ camphoræ f. 5xij ;
 Liquoris antimonii tartarizati ℥ xx ;
 Syrupi croci f. 3j ;
 Fiat haustus diaphoreticus quartis horis sumendus.

R. Liquoris ammoniæ acetatis f. 5iij ;
 Pulveris ippecacuanhæ compositi gr. ijss ;
 ———— tragacanthæ compositi gr. viij ;
 Misturæ camphoræ f. 3x ;
 Syrupi aurantii f. 3j ;
 Misce pro haustu singulâ quartâ horâ sumendo.

R. Pulveris antimonialis gr. iv ;
 ———— tragacanthæ compositi gr. xv ;
 Spiritûs ætheris nitrici f.3j ;
 Misturæ camphoræ f.3xiij ;
 Syrupi papaveris f.3j ;

Fiat haustus quartâ quaque horâ sumendus.

R. Pulveris antimonialis gr. iv—viij ;
 ———— contrayervæ ʒj ;

Fiat pulvis quartâ vel sextâ quaque horâ ex syrupo deglutendus.

The *second indication* requires the exhibition of tonics, previous to which, if the skin be hot and dry, the tongue dry and crusted, the pulse hard, and the bowels constipated, mild aperients and gentle cordial diaphoretics should be given.

R. Pulveris rhei ʒj ;
 Potassæ supertartratis ʒj ;
 Pulveris cinnamomi compositi gr. v ;

Fiat pulvis aperiens.

R. Potassæ tartratis ʒj ;
 Pulveris rhei gr. x ;
 Infusi sennæ f.3xiij ;
 Syrupi aurantii ;
 Tincturæ cardamomi eompositæ, āā f.3j ;

Misce pro haustu aperiente.

R. Pulveris rhei gr. xij ;
 [———— cinnamomi compositi gr. v ;]
 Hydrargyri submuriatis gr. iij ;

Fiat pulvis aperiens, ex pauxillo mellis, capiendus.

R. Hydrargyri submuriatis gr. v ;
 Fiat pulvis, pro re nata, sumendus ex syrupo vel melle.

R. Extracti coloeynthidis eompositi gr. vj ;
 Hydrargyri submuriatis gr. iij ;
 Fiat bolus aperiens, vel pilulæ duæ.

R. Pulveris ipecacuanhæ compositi gr. v ;
 Fiat pulvis diaphoreticus sextâ quaque horâ sumendus,
 ex haustu salino communi.

R. Misturæ eamphoræ f.3xiij ;
 Liquoris ammoniæ acetatis f.3iij ;
 Spiritûs ammoniæ eompositi ℥ xx ;
 Syrupi aurantii f.3j ;
 Fiat haustus sextâ quaque horâ potandus.

R. Misturæ camphoræ f. ʒxiij;
 Liquoris antimonii tartarizati ℥ xx;
 Spiritûs ætheris nitrici f. ʒj;
 Syrupi rhæados f. ʒj;
 Fiat haustus sextâ quaque horâ ebibendus.

MISTURA CAMPHORÆ FORTIOR.

The strong Camphor Mixture.

R. Camphoræ gr. xxv;
 Amygdalas dulces decorticas sex;
 Sacchari purificati ʒiij;
 Optime contere, dein adde gradatim
 Aquæ menthæ viridis f. ʒviijss;
 Ut fiat mistura.

Or,

R. Camphoræ gr. xxv;
 Spiritûs rectificati ℥ v;
 Fiat terendo pulvis; dein adde
 Pulveris acaciæ ʒiv;
 Syrupi limonis f. ʒss;
 Aquæ menthæ viridis f. ʒviij;
 Ut fiat emulsio:—sit dosis cochlearia tria magna.

When the object is to administer camphor, which, in many cases of febrile action, allays irritation, promotes perspiration, and induces sleep, one of these mixtures should be administered, and not the Mistura Camphoræ of the Pharmacopœia, which contains a very small quantity of the drug, and is better calculated for the vehicle of medicines, than to effect any change in the actions of the system. [The addition of ʒiv. of carbonate of magnesia, as recommended in the Dublin Pharmacopœia, is a decided improvement.]

R. Camphoræ gr. iv;
 Pulveris antimonialis gr. iij;
 Mucilaginis acaciæ q. s.
 Fiat bolus sextâ quaque horâ adhibendus.

One or other of these remedies being premised, and a gentle diaphoresis resulting, then tonics, quinine, cinchona, casca-

rilla, cusparia, calumba, serpentaria virginiana; acids; acidum sulphuricum, nitricum, muriaticum, &c.; wine, red-port, Madeira; antispasmodics; camphora, moschus, castoreum; æthers; spiritus ætheris sulphurici compositi, spiritus ætheris nitrici; the affusion of cold water under the restrictions before mentioned.

R. Decocti cinchonæ f.3xiij;
 Acidi sulphurici diluti ℥ x;
 Syrupi rosæ f.3j;
 Tincturæ cardamomi compositæ f.3j;
 Fiat haustus quartâ quaque horâ sumendus.

R. Decocti cinchonæ f.3xiij;
 Tincturæ ejusdem f.3js;
 Syrupi aurantii f.3j;
 Spiritûs ætheris nitrici f.3ss;
 Fiat haustus quartis horis sumendus.

[The sulphate of quinine is now generally used in preference to any other preparation of cinchona, and may be prescribed as follows:

R. Quininæ sulphatis gr. ij;
 Infusi rosæ ʒxiij;
 Fiat haustus quartis vel quintis horis bibendus.

Or,

R. Vini Maderæ generosi Oss;
 Quininæ sulphatis gr. vj;
 Fiat mistura cujus sumatur cochleare amplum secundâ vel tertiâ quaque horâ.]

R. Infusi cascarillæ f.3xiij;
 Tincturæ ejusdem f.3ij;
 Syrupi aurantii f.3j;
 Fiat haustus quartâ quaque horâ deglutiendus.

R. Radicis serpentariæ contusæ ʒss;
 Corticis cascarillæ contusæ ʒiiij;
 Aquæ ferventis Oj;
 Macera in vase clauso per horam, dein cola.

R. Hujus colaturæ f.3xiij;
 Tincturæ aurantii f.3jss;
 Syrupi aurantii f.3j;
 Misce pro haustu quarta quaque horâ capiendo.

R. Decocti cuspariæ f. ʒiiv ;
Tincturæ cinchonæ compositæ f. ʒj ;
Confectionis aromaticæ ʒj ;
Syrupi aurantii f. ʒj ;

Fiat haustus quartis horis hauriendus.

As the disease advances, the strength must be supported by dilute wine with sago, arrow-root, tapioca, and the like ; recent subacid fruits may be given, and light preparations of animal food, if there be no symptoms of putrescency, such as calf-foot jelly, veal or chicken broth, beef-tea, &c.

Sleep should be procured by mild opiates, with some diaphoretic, as the syrupus papaveris, opium, or mithridatum.

R. Mithridati ʒj ;
Misturæ camphoræ f. ʒxiij ;
Liquoris antimonii tartarizati ℥xx ;
Syrupi rosæ f. ʒj ;

Misce pro haustu, hora somni sumendo.

R. Tincturæ opii ℥xx ;
Misturæ camphoræ f. ʒxiij ;
Spiritus ætheris nitrici,
Syrupi rhæados, āā f. ʒj ;

Fiat haustus opiatus.

Or,

[R. Aquæ menthæ piperitæ ʒi ;
Liquoris opii sedativi ℥xx ;
Syrupi aurantii ʒiv ;

Fiat haustus hora decubitûs hauriendus.]

R. Pulveris antimonialis gr. iij ;
————— cornu usti cum opio gr. x ;

Fiat pulvis opiatus, hora somni, ex syrupo, deglutiendus.

If there be delirium arising from a determination of blood to the head, as indicated by a suffused redness of the eyes, dilated pupil, and inordinate sensibility and irritability, let the following be applied to the head :

R. Spiritus ætheris sulphuriei f. ʒss ;
Acidi acetici f. ʒij ;
Misturæ camphoræ f. ʒxiij ;

Fiat lotio fronti, et temporibus frequenter applicanda.

Or,

R. Camphoræ gr. x ;
 Aceti communis f. ʒij ;
 Aquæ destillatæ f. ʒxiv ;

Fiat lotio frigide applicanda capiti raso.

If it be not relieved by these means,

Imponatur, nuchæ capitis, vel suris externis, emplastrum lyttæ.

Cataplasmata ex farina seminum lini pedibus imponenda.

Vel,

R. Pulveris seminum lini,
 _____ avcnæ, āā ʒvj ;
 _____ sinapis ʒj ;
 Aceti ferventis q. s.

Fiant cataplasmata duo, pedibus admovenda.

[Should these measures fail, we should pour cold water on the head from a ewer applied close to the part, and gradually raised to the height of three or four feet. This cold dash will often succeed when local and general bleeding has failed. It may be repeated until quietude or somnolence is produced.—See Synochus, with cerebral affection.]

If it be the low muttering delirium, or incoherence of ideas above mentioned, opium, musk, camphor, and blisters to the head.—See p. 90.

Six drops of laudanum may be added to each tonic draught; or a proportional dose of the pulvis cornu usti cum opio, or confectio opii.

R. Misturæ moschi f. ʒvj ;
 Tincturæ cardamomi compositæ f. ʒj ;

Fiat mistura, cujus sumat æger cochlearia duo magna secundis horis.

R. Misturæ moschi f. ʒvij ;
 Spiritûs ætheris sulphurici compositi f. ʒij ;
 Syrupi rosæ f. ʒiij ;

Fiat julapium, de quo capiat æger cochleare magnum subinde.

R. Misturæ moschi,
 _____ camphoræ fortioris, āā f. ʒiij ;
 Spiritûs ætheris nitrici f. ʒij ;
 Syrupi rhæados f. ʒss ;

Fiat mistura, cujus, sumantur cochlearia duo magna tertiâ quaque horâ.

A diarrhœa, not critical, should be checked by the exhibition of opium, of ipecacuanha in small doses, alone, or joined with opium; by cordials, astringents; catechu, kino, extract of logwood.

R. Pulveris cornu usti cum opio ℥ss;
 ————— ipecacuanhæ gr. j;

Fiat pulvis octavis horis sumendus.

R. Misturæ cretæ f. ℥viij;
 Vini ipecacuanhæ f. ℥jss;
 Tincturæ zingiberis f. ℥ss;
 Tincturæ opii f. ℥ss;
 Syrupi papaveris f. ℥ss;

Fiat mistura.

R. Misturæ cretæ f. ℥viij;
 Confectionis aromaticæ f. ℥jss;
 Tincturæ opii m xxx;

Fiat mistura.

R. Misturæ cretæ f. ℥viij;
 Confectionis opii ℥j;

Fiat mistura.

R. Misturæ cretæ f. ℥vj;
 Tincturæ cardamomi compositæ f. ℥j;
 Syrupi zingiberis f. ℥ss;
 Pulveris ipecacuanhæ compositi gr. xv;

Fiat mistura.

R. Electuarii catechu Pharm. Edinb. ℥iij;
 Decocti cuspariæ f. ℥viij;
 Tincturæ ejusdem f. ℥iij;

Fiat mistura.

Three table-spoonsful of any of the above mixtures may be given every two, three, or four hours, or after every purging stool, and the opium increased if necessary.

[An ounce of syrup should be added to each of the above, in which this ingredient is omitted.]

Mulled red-port wine, or pure port wine, or dilute brandy, should be frequently administered. [Madeira and sherry are equally good.]

Profuse sweats are to be restrained by acidulated drinks, and by the use of vegetable and mineral acids.

R. Misturæ camphoræ fortioris f. ℥viij ;
 Acidi sulphurici diluti f. ℥jss ;
 [Syrupi glycyrrhizæ 3vss] ;
 Fiat mistura, ejus capiat æger cochlearia tria subinde.

R. Infusi rosæ f. ℥vj ;
 Vini rubri f. ℥ij ;
 Miscee pro potu ordinario.

Should the extremities become cold, direct sinapisms to the feet, blisters to the inside of the legs above the aneles, and give camphor and æther.

R. Misturæ camphoræ fortioris f. ℥viij ;
 Spiritus ætheris sulphuriei compositi f. ℥ij ;
 Fiat mistura, ejus sumantur cochlearia duo magna in horas.

TYPHUS GRAVIOR.—PUTRID FEVER.

SYMPTOMS.—The attack of this disease is much more sudden than that of the preceding, and its progress more violent and rapid; the rigors are extremely severe; the prostration of strength greater and more early, and the expression of anguish and horror more acute; the heat of the skin is often moderate, though in some instances it soon rises to a degree greater than in any other fever, to 108 degrees of Fahrenheit, and is peculiarly acrid and burning to the touch; the pulse is frequent, small, and sometimes possesses considerable hardness; nausea and bilious vomiting; intense pain in the head; tinnitus aurium; preternatural throbbing of the temporal and carotid arteries; ferrety redness of the eyes; extreme anxiety; ferocious delirium; the tongue is dry and covered with a brown or black crust; the breath is hot and offensive; fœtid sordes accumulate about the teeth; the urine, at first pale, then becomes extremely high-coloured and fœtid, and in the last stage of the disease often deposits a black sediment.

In the advanced stages hæmorrhages break out from different parts of the body; blood is effused under the skin, forming petechiæ, maculæ, and vibices. The excretions become involuntary, and extremely offensive; [the fæces become black, the urine passed in bed, or retained; the features are

changed and sharpened ; there is great prostration of strength, difficult deglutition and respiration ;]—gangrenous aphthæ appear about the mouth and throat ; the pulse sinks, and intermits ; the extremities grow cold, [and covered with a viscid cold sweat ;] hiccup ensues ; and before dissolution the patient exhibits a most complicated scene of misery.

[*Morbid appearances.*—Putrefaction rapidly advancing, mucous membrane of the lungs and intestinal canal softened or gorged with a thin black blood. Results of inflammation in some cases observable in the head, chest, and abdomen ; in other instances there is no disorganization apparent, but a rapid tendency to decomposition of the viscera and other parts of the body.]

CAUSES.—*Predisposing.*—All those causes inducing debility already enumerated under typhus mitior ; want of cleanliness ; confined air ; close and humid state of the atmosphere.

Exciting.—Contagion is mostly the exciting cause, applied either immediately from the body of a person labouring under the same fever, or conveyed by the wind, in clothes, or merchandise, &c.

[Many eminent moderns deny that this disease is contagious ; and we know that it may arise from various other causes besides contagion. It is seldom observed in London, though common in Dublin and Edinburgh. Some deny that the disease is seen in its idiopathic form as described above. It is the adynamic, ataxic, or asthenic fever of some writers. It may supervene after local inflammation of any part of the body.]

DIAGNOSIS.—*From typhus mitior.*—Vide Typhus mitior.

From synocha.—By the sudden and great prostration of strength which ensues on its first attack ; by the constitution of the patient ; by the brown or black tongue ; the livid flush of the countenance ; the black and foetid sordes about the teeth ; the less degree of strength, yet greater frequency and hardness of pulse ; the acrid and more intense heat of the skin ; the symptoms of putrescency above-mentioned.

PROGNOSIS.—*Favourable.*—The countenance preserving nearly its natural state, the look firm and clear, and the face not extenuated. A crisis accompanied with any of the symptoms mentioned under typhus mitior ; an abatement of febrile

heat and thirst ; a gentle, warm moisture diffused equally over the whole surface of the body, succeeded by a rising of the pulse ; the absence of delirium and stupor ; the prostration of strength not great ; the petechiæ or hæmorrhages being of a florid, red colour.

Unfavourable.—In addition to those already enumerated as marking extreme debility in typhus mitior, the peculiar appearance of the patient ; his eyes inflamed and staring, his speech quick, the sound of his voice altered ; extreme anxiety and perpetual watchfulness ; increased vascular action and diminished muscular power ; high delirium ; loss of sight ; dry, black tongue ; nausea, or constant vomiting ; fœtid and involuntary excretions ; passive hæmorrhages ; dark-coloured, livid, petechial eruptions ; yellowness of the skin ; tension of the abdomen ; black and gangrenous aphthæ, gangrene of blistered places ; partial cold and clammy sweats ; cadaverous smell of the whole body.

[*Critical days.*—It has been long observed that all fevers, intermittent, remittent, and continued, assume the quotidian, tertian, and quartan types, and hence referred to one genus. Hence it has been remarked by the ancient physicians, that fevers terminated on certain days, as the third, fifth, seventh, ninth, eleventh, fourteenth, seventeenth, twentieth, or twenty-first, and these were called *critical days*. Many deny this doctrine, but many maintain it. The editor has known ordinary nurses predicate the critical change with perfect accuracy ; but in some cases it is not observable. Perhaps the fevers described by the ancients were different from those now observed ; and, indeed, we all know that the type of fever is constantly modified by epidemic influence.]

TREATMENT.—*Indications.*—I. To moderate the excessive febrile action, and to support the strength of the patient.

II. To obviate the putrid tendency in the fluids.

The *first indication* requires the means recommended for the cure of the preceding disease ; great reliance is placed by some practitioners on the frequent ablution with cold water and vinegar, employed under the restrictions there mentioned. Much benefit has been derived from the use of the spiritus ætheris sulphurici compositus.

R. Spiritûs ætheris sulphurici compositi f. 3iij;
Misturæ camphoræ f. 3viiss;
[Syrupi aurantii 3ss;]

Fiat mistura, cujus capiat æger cochlearia iij. magna
tertiâ quaque horâ.

R. Spiritûs ætheris sulphurici compositi f. 3iij;
Misturæ camphoræ fortioris f. 3vij;
[Syrupi croci 3v;]

Fiat mistura, cujus capiat æger cochlearia tria magna
tertiâ quaque horâ.

The *second indication* is partly answered by fulfilling the first; by the utmost cleanliness [removal of excretions as soon as evacuated]; frequent change of linen; ventilating and fumigating the apartment of the patient; frequently sprinkling the room with vinegar or camphorated spirits [or a solution of chloride of lime or soda]; the use of acid and acescent fruits, such as currants, grapes, oranges, roast apples, &c.

The exhibition of antiseptics, especially cinchona, in combination with acids :—

R. Decocti cinchonæ f. 3xij;
Tincturæ cinchonæ f. 3ij;
Acidi sulphurici diluti ℥ x;
Syrupi aurantii f. 3j;

Fiat haustus.

R. Decocti cinchonæ f. 3xij;
Tincturæ ejusdem f. 3iss;
Acidi muriatici ℥ iij;
Syrupi aurantii f. 3j;

Fiat haustus.

R. Decocti cinchonæ f. 3xij;
Tincturæ ejusdem f. 3jss;
Acidi nitrici diluti ℥ viij;
Syrupi aurantii f. 3j;

Fiat haustus.

R. Extracti cinchonæ mollis 3ss;
Decocti cinchonæ f. 3xij;
Tincturæ ejusdem f. 3ij;
Acidi muriatici ℥ iij;
Syrupi aurantii f. 3j;

Fiat haustus.

One of these draughts to be taken every two, three, or four hours.

[Quinine is now generally preferred to cinchona, and may be given daily to the amount of twenty-four grains in bad cases. See p. 92.

R. Quininæ sulphatis gr. ij;
Acidi sulphurici diluti ℥ ij;
Aquæ destillatæ ℥ i;
Syrupi croci ʒiv;

Fiat haustus secundis, tertiis, vel quartis, horis exhibendus.]

The decoction of cusparia, quercus, serpentaria, or cascarrilla may be used, made in the same way as the decoction of the cinchona, and employed in the same dose, combined with tincture and acid.

The intestinal canal should be assiduously cleared from any accumulated fæces, by the occasional use of gentle laxatives, as rhubarb and cream of tartar, submuriate of mercury, and mild clysters [especially at the commencement and stage of excitement of the disease. When the stage of collapse commences, purgation ought to be avoided.]

R. Aceti communis f. ʒiij;
Infusi anthemidis f. ʒv;

Misce pro enemate.

R. Sodæ muriatis ʒss;
Aceti communis f. ʒij;
Infusi anthemidis f. ʒvj;

Fiat enema.

R. Potassæ nitratis ʒiij;
Aceti communis f. ʒjss;
Infusi anthemidis f. ʒvj;

Fiat enema.

Phosphorus dissolved in æther or oil, and made into an emulsion with mucilage of acacia-gum, has been employed with beneficial effect in the last stages of typhus by Drs. Mentz, Wolff, Leroy, and others; but the difficulty of obtaining and mixing it, and the great caution that is requisite in the exhibition, are such as to prevent its general use; and it should never be given but under the direction of the most experienced and skilful.

R. Phosphori gr. iv;
Olei amygdalæ f. ʒj;

Solve.

R. Hujus olei phosphorati ℥ vj;
Mucilaginis acaciæ f. ʒij;
Aquæ cinnamomi f. ʒvj;

Fiat haustus, in horas, vel secundâ, vel tertiâ quaque horâ adhibendus.

If aphthæ appear, the gargles recommended for cynanche maligna may be employed.

Should hæmorrhages arise—the acidulated infusion of roses, in addition to other antiseptics; but more especially the oxygenated muriatic acid, [or what is still better is the acetate, with the liquor opii sedativus, or the acetum opii of the Dublin Pharmacopœia.—See Hæmoptysis.]

R. Acidi oxymuriatici ℥ xx;
Decocti cinchonæ f. ʒxij;
Tincturæ ejusdem compositæ;
Syrupi aurantii āā f. ʒj;

Fiat haustus tertiâ quaque horâ sumendus.

When the oxygenated muriatic acid is not at hand, one minim of the muriatic and as much nitric acid may be substituted.

[In some cases there are great prostration of strength and stupor from the invasion of the diseases which obscure local affections, and generally terminate in death. In the disease called yellow fever of the west, the abdominal viscera are affected; in the fever of the east, or plague, the axillary and inguinal glands are inflamed, and buboes form and suppurate.

When there is profound prostration from the onset of typhus, the muscular power is greatly diminished, the pulse is small, feeble, soft, and easily stopped by pressure, and the respiration is hurried, laborious, or difficult, it is necessary to sustain the powers of life by stimulants, as ammonia, wine, quinine, cinchona, with the solutions of the chlorides of soda or lime, taken internally, sponging the body with these liquids,

friction with aromatic tinctures, together with clysters of the above substances are the principal means of cure*. Sina-

* As the chloride of lime has no place in our Pharmacopœias, it is prudent to give its formulæ. Two table-spoonsful of this salt dissolved in a quart of water, or one part to sixty, is recommended as a disinfecting agent to correct putrid and noxious vapours arising from water-closets, drains, confined apartments. A dessert-spoonful in a wine-glassful of water has been given two or three times a day, but a better formula is the following :—

R. Solutionis calcis chlorureti 3i;
Mueilaginis acaciæ 3ij;
Syrupi aurantii 3x;

Fiat haustus secundâ vel tertiâ quâque horâ potandus.

Dr. Reid of Dublin has used this remedy in typhus and dysentery with advantage.—(*Trans. Dub. Coll. Phy.* v. 5.)

R. Decocti hordei 3x;
Solutionis calcis chlorureti 3iv;

Fiat enema mane vespereque injeciendum.

The following is the formula for ablution or sponging the body :—

R. Solutionis calcis chlorureti 3j;
Aquæ puræ 3xij.

This lotion is also applied to gangrenous ulcers consequent to fevers or other tedious diseases; and also when they are idiopathic. If it causes pain, it ought to be diluted with water, or

R. Calcis chlorureti pulveris 3iv;
Aquæ puræ Oiv.

As a gargle, a vaginal or rectal injection, the following formula is employed :—

R. Calcis chlorureti pulveris 3j;
Aquæ rosæ Oj.

This chloride is preferable to that of soda, being less disagreeable for medicinal use, and it is also employed for other important purposes, [but the latter is often used].

For the purpose of disinfecting the chambers of the sick, to purify the air in hospitals, workhouses, prisons, ships, and

pisms are preferable to blisters in this form of the disease, as gangrene often follows the employment of the latter. It

crowded places, we sprinkle the floors occasionally with the diluted liquid, in the proportion of one part of chloride to sixty of water; expose it in dishes; moisten linen cloths in it, and suspend them in the apartment or place to be disinfected, renewing twice or thrice a day, and let the fetor regulate the frequency and strength; but fresh air must be frequently admitted, or irritation or inflammation of the respiratory organs will be induced.

It is equally applicable in rooms or houses newly sized or painted, in kitchens or workshops where charecoal fires are kept, in manufactories, &c. where operations on animal substances are carried on.

To disinfect clothes, linen, &c., especially of patients infected with contagious disorders, bandages, lint, &c., we throw them into a solution of the liquid, and they may be withdrawn immediately completely disinfected; or the clothes may be hung in a closet with a quantity of the dilute solution placed in a shallow vessel. In cases of a malignant nature, the linen, &c. had better be allowed to remain in the liquor for a couple of hours, and afterwards rinsed out in clear water.

Night chairs, or any vessels in which putrid animal or vegetable matter has been kept, should be rinsed out with a little of the solution, and, when in use, one glassful poured into the chair or pan.

To disinfect dead bodies, and for the use of searchers, undertakers, and jurymen; and to protract the necessity of early interment in warm weather, or in cases of great personages lying in state, or to disinfect bodies for the purposes of judiciary investigations, the body should be washed occasionally with the solution, and it will retard putrefaction. Sprinkle the floor often. Sprinkle the shroud with about one quarter of a pint of the fluid, or lay a slightly moistened cloth upon the body within the coffin, according to the heat of the weather, &c.; or surround the corpse with a sheet well moistened with the solution, and renew the moistening frequently.

To disinfect sewers, drains, cesspools, water-closets, &c. a quantity of clean water should be first thrown into the offensive place, and then a pailful of the diluted solution, one pint to two pailful. If not successful, repeat the application after ten minutes. In emptying very dangerous sewers, place a pailful by each workman; wash the nostrils

is therefore a bad practice to apply several blisters to a patient in the last stage of this fever; for example, to the head, neck, spine, and legs, at the same time, for if intended to rouse the vital powers, the application of warm turpentine will answer the purpose much better, and much more speedily. In cases of collapse, we must not leave sinapisms applied to the feet longer than four, six, or eight hours, even though they seem to produce no apparent effect; but should recovery happen, ulceration will attack the parts to which the cataplasm has been applied, [or amputation may be necessary].

When the stage of excitement comes on about the fourth, fifth, or sixth day, some persons employ venesection to abridge or diminish it; but great caution is necessary in the use of depletion; and the brightest ornaments of the profession are of opinion that the abridgement or abatement of reaction cannot be affected by this remedy. A few maintain the opposite opinion. Venesection is useful in lowering reaction in inflammatory fever or synochus, but in the worst form of the disease under consideration, it cannot be employed with safety or advantage.—See p. 74.

Opiates when improperly administered, augment thirst, heat, and general distress, parch the tongue, and suppress the secretions. It is doubtful whether morphia or the other sedative preparations of opium produce the effects just detailed. When opium is contra-indicated, we may substitute the black drop, one drop being equal to four of tinctura opii, or we may exhibit the tinctura hyosciami.

R. Aquæ cinnamomi ℥j;
Tincturæ hyosciami ℥xxx;
Syrupi simplicis ℥iv;

Fiat haustus.

When opiates increase cerebral disturbance, delirium, induce flushing of the countenance, dry tongue, and constipation, they should be discontinued. When these effects are produced by

occasionally, or moisten a sponge with the liquid, and let it be fixed near the mouth and nostrils. Sprinkle the soil as fast as thrown from stage to stage.

quinine or cinchona, either must be abandoned. Antimony has once more become a favourite remedy in fever; and its having fallen into disuse may be fairly ascribed to its failure in consequence of adulteration,

Wine is now seldom employed unless in the lowest type of fever, or in the stage of collapse, when it will be a most valuable remedy. Like antimony, it has been condemned, in consequence of the absurd and erroneous notion that pure typhus is seldom seen, and that it is generally combined with inflammation in the head, chest, or abdomen. When the skin becomes hot, the tongue dry, the pulse quicker, the breathing hurried, the face flushed, wine is prejudicial. If on the contrary, there is less restlessness, a tendency to sleep, the countenance more placid, the tongue moist, the pulse becoming fuller, the skin moderately warm, with a tendency to moisture, the respiration tranquil after the use of wine, then it has done good, and ought to be continued. In some cases the unlimited use of stimulants is indispensable and beneficial.

When symptoms of prostration set in about the twelfth or fifteenth day of the disease, and when there has been no sign of local inflammation present during the former period, we must employ diffusible stimulants, such as the following:—

R. Misturæ camphoræ c. magnesia $\bar{3}$ vj;
Spiritus ammoniæ aromatici $\bar{3}$ ij;
Quininæ sulphatis gr. vi;
Olei menthæ piperitæ \mathfrak{m} v;
Syrupi glycyrrhizæ $\bar{3}$ j;

Dosis cochleare amplum singulis, secundis, vel tertiis horis.

Or,

R. Misturæ camphoræ c. magnesia $\bar{3}$ vj;
Carbonatis ammoniæ $\bar{3}$ - $\bar{3}$ j;
Quininæ sulphatis gr. x-xx;
Mellis optimi $\bar{3}$ j;

Fiat misturæ, cujus sumat cochleare amplum pro dosi secundâ quaque horâ.

In the last stage of this fever there is a gradual decline of the power of deglutition, and the patient can seldom take draughts, though he can swallow a table-spoonful with ease. In such cases, the muscles concerned in deglutition lose their power, and hence there will be less difficulty experienced in swallowing a table-spoonful than a tea-spoonful, as the latter will necessarily require more muscular exertion.

When diarrhœa supervenes, we must check it by ordinary astringents.

R. Misturæ cretæ \bar{z} vj;
Tincturæ eatcchu \bar{z} ijj;
Confectionis aromaticæ $\bar{\Theta}$ \bar{z} ijj;
Tincturæ opii \bar{z} j;
Syrupi zinziberis \bar{z} j;
Olei menthæ piperitæ m iv;

Fiat mistura de quâ deglutitur cochleare amplum post singulas sedes liquidas, vel singulis horis, donec alvus fiat astricta, vel supervenerit somnolentia.

Or,

R. Aquæ cinnamomi \bar{z} v;
Confectionis aromaticæ \bar{z} ij-iiij;
Tincturæ kino \bar{z} ijj;
Extracti hæmatoxyli \bar{z} j;
Liquoris opii sedativi \bar{z} ss;
Syrupi simplicis \bar{z} j;

Dosis cochleare amplum post singulam alvi dejectionem.

Clysters of starch and laudanum are useful.

When subsultus tendinum, tremors of the hands, involuntary evacuations, slipping down in the bed, and low muttering delirium supervene, we employ stimulants and anti-spasmodics.

R. Misturæ camphoræ cum duplice
Camphoræ quantitate \bar{z} vijj;
Spiritus ætheris sulphurici \bar{z} ij;
Tincturæ opii \bar{z} ss;
Pulveris moschi \bar{z} ss;
Spiritus ammoniæ aromatizati \bar{z} ij;
Quininæ sulphatis $\bar{\Theta}$ ss- $\bar{\Theta}$ j;

Fiat mistura, in doses tres quatuorve partitur, et bihorii intervallo vel trihorii, pro ut urgeant symptomata, singula haurienda.

Or,

R. Camphoræ pulveris ʒj;
 Sacchari, vel mellis ʒj;
 Aquæ ferventis ʒviij;
 Misturæ moschi ʒvj;
 Spiritus ætheris sulphurici ʒiij;

Fiat mistura, cujus sumatur cochleare amplum secundâ quaque horâ.

Sinapisms are also necessary in these cases.

R. Sinapis pulveris,
 Lini ——— āā ʒviij;

Aceti calidi quantum sufficit ut fiat cataplasma plantis montibus et pedum applicandum, per tres vel quatuor horas.

When petechiæ, vibices, or maculæ appear, our chief dependence is placed on quinine, cinchona, and saline medicines. Formulæ for the first and second remedies are given in the treatment of typhus mitior, p. 78, also pp. 86—92.

MISTURA SALINA EFFERVESCENS.

Saline effervescing Mixture.

R. Sodæ subcarbonatis ʒiv;
 Aquæ menthæ viridis ʒviij;
 Sodæ tartarizatae ʒij;
 Syrupi simplicis ʒj;

Fiat mistura, cujus dentur cochleria duo ampla cum uno succi limonis recentis in actû effervescentiæ, secundâ quaque horâ.

Or,

R. Potassæ subcarbonatis ʒj;
 Aquæ menthæ piperitæ ʒx;
 Syrupi aurantii ʒij;

Fiat haustus, cui tempore ebibendi adde, succi limonis recentis cochleare amplum unum, et in effervescentiâ exhibeatur.

Or,

R. Sodæ subcarbonatis ʒj;
 — tartarizatae ʒj;
 Aquæ cinnamomi ʒxj;
 Syrupi zinziberis ʒj;

Fiat haustus cum cochleari amplo succi limonis in ipso actû effervescentiæ assumatur.

These mixtures have long been administered during the first and second stages of fever as refrigerants; but, according to Dr. Stevens, they will prevent the dissolution of the blood in all fevers. He also advises muriate of soda, nitrate of potass, and tartarized soda for the same purpose; and during the epidemic cholera of this year the following formula, which some lauded, and most declared to be useless:—

R. Sodæ muriatis ʒj;
 — carbonatis ʒj;
 Potassæ oxymuriatis gr. viij;

Fiat pulvis in aquæ cyatho omni quadrante horæ sumendus.

In two cases of purpura in children, the editor of this work effected a cure by the use of the carbonate of soda saturated with lemon juice.

When putrescency appears in fever, great reliance was placed, by the older physicians, on the infusion of malt, which was prepared as follows:—To a pint of wort, or infusion of malt, two table-spoonsful of yeast and one of soft sugar were added; the vessel was covered and placed near the fire to promote fermentation, which soon took place. The scum was frequently removed, and the fluid administered in divided portions. The editor has found it a valuable remedy; it is generally relished, and acts as a mild aperient.

The mineral acids, especially the diluted muriatic, carbonated liquids, with wine and cinchona, are of great value in this stage of typhus gravior.

R. Infusi calumbæ ʒiiss;
 Acidi muriatici ℥vj;
 Tincturæ opii ℥iv;

Fiat haustus secundis vel tertiis horis exhibendus.

R. Aquæ menthæ piperitæ ʒj;
 Syrupi aurantii ʒiv;
 Acidi muriatici,
 — nitrici, āā ℥ij;

Fiat haustus.

R. Decocti cinchonæ ʒxi;
 Acidi sulphurici diluti ℥xij;
 Syrupi glycyrrhizæ ʒi;

Fiat haustus.

R. Aquæ destillatæ $\bar{3}$ x;
 Acidi nitrici diluti $\bar{3}$ ij;
 Syrupi aurantii $\bar{3}$ ij;
 Misce pro potu ordinario.

These draughts are preferred to wine, ammonia, and quinine, by some writers.

Serpentaria, cascarilla, camphora, the æthers, are also used in this last stage of typhus.

If the abdomen becomes tense and tympanitic from the secretion of gas, which is termed meteorization or meteorism, the asafœtida enema, with the application of camphorated spirit to the abdominal surface, will often produce relief. We should add essential oils to any carminative medicine we employ at the same time. Some have advised large doses of quinine, and others oil of turpentine in moderate quantities, to stimulate the intestinal tube, or excite its muscular action, and thereby cause the expulsion of gas.

When the symptoms improve, and a crisis takes place, it is necessary to administer the vegetable jellies, sago, arrow-root, tapioca, water-gruel, and after three or four days, small quantities of chicken broth, beef and veal tea, and animal jellies. Should the latter excite the circulation, and produce constitutional disturbance, they should be omitted, or tried in smaller quantities. Custards, fresh fish, the breast of a chicken, turkey, or partridge may be given about the sixth or eighth day; ale, porter, and a small quantity of wine at this time. A cautious use of tonics, quinine, calumba, cascarilla, gentian, &c. is advisable during convalescence. The bowels should be kept open by some mild aperient.

Convalescence.—There is great danger of relapse after the cessation of fever, and should this occur, it will be much more difficult to treat it than the primary attack. This must be obvious, when we remember the universal disturbance of the functions during fever, and the profound debility caused by this disease. Relapses are produced by allowing the patient to rise too early from bed, or to indulge in the use of animal food, for which there is often a craving after the cessation of fever. When this is indulged, a relapse takes place, and often

in a few hours death will follow. The patient should remain in bed for eight or ten days after the fever has entirely ceased, that is, during his convalescence; and he should not be allowed animal food, wine, fermented or spirituous liquors sooner than the eighth or tenth day, unless ordered by his medical attendant. In private practice, it is often impossible for the attendant to guard against relapses, because as soon as convalescence is established, his visits are discontinued: he is often recalled to witness the death of one who a few days before was out of danger.

The patient should be removed during the day into another apartment, which will tend to dissipate the gloom of the sick chamber, and allow time to have the latter properly regulated and ventilated. He should not be allowed into the open air for a few days after his recovery, or until he is able to walk a little in his sitting-room. In consequence of the great excitability in the system after fever, it is highly improper to allow the convalescent into the open air when the weather is cold, damp, or windy, or when it is very hot, damp, or dusty. He should go out at first in a close carriage, and wear additional covering; but moderate exercise on foot is preferable, as it circulates the blood in every part of the body, and, by the action of the abdominal muscles on the intestines, stimulates the latter, and induces their evacuation—a desirable object, as constipation is a very frequent occurrence after recovery from any acute disease. Other rules are to be observed, as the avoidance of cold and damp, for a temporary exposure or sitting in cold or moist places is highly injurious. He should take little drink at meals, masticate his food slowly and efficiently, and avoid exercise and sleep soon after a repast. When convalescence occurs in spring, winter, or cold weather, flannel should be worn next the skin, woollen stockings, and strong shoes or boots, with warm clothing. Convalescents should avoid venereal indulgence, and much reading; the first causes great debility, the second weakness of vision, which is seldom curable. When the hair falls off, which is frequently the case, it is not proper to shave the head until the patient is completely recovered. The infusion of box-wood is preventive of this species of alopecia.

SYNOCHUS.—MIXED FEVER.

This is a compound of synocha and typhus. It commences with some of the symptoms of the former, and terminates in those of the latter. At first the pulse is strong and hard, the tongue white, the urine high-coloured; soon, however, the tongue becomes yellow, then brown; the pulse loses its strength, yet retains its hardness, and becomes more quick; prostration of strength supervenes; and the disease assumes the form of typhus mitior, or gravior, as certain predisponent circumstances of constitution, or cause, may happen to be present.

The usual and almost universal *cause* of this fever is cold; the morbid effects of which are promoted by its union with moisture, or by a debilitated state of constitution however previously induced*.

The *treatment* has been already fully described. In the commencement, it will be that laid down for the cure of inflammatory fever: the utmost caution must however be employed in the use of those means which lower the tone of the system, especially bleeding, so that sufficient strength may be left to combat the succeeding stage, in which the treatment of typhus must be employed.

There are several species of synochus, according as particular symptoms preponderate, as the bilious, verminous, &c.; [or when there is cephalic, thoracic, or abdominal inflammation consequent to this disease.]

It is now almost universally admitted, that continued fever is a general disorder or disease of the system, not caused by local inflammation, though this is a frequent but not an invariable consequence. The phenomena of the first stage of this fever are exactly similar to those of an intermittent, but

[* It is remarkable that Cullen designates synocha a non-contagious disease, and yet maintains that it may terminate in typhus, a contagious disease. This accords with the modern opinion, that a non-contagious disease may become contagious under certain circumstances, which is absurd.]

in a minor degree, and of longer duration. We observe a cold stage ushered in by rigor or shivering, languor, and lassitude, disinclination to make mental or corporeal exertion, loss of appetite, constipation of the bowels, urine diminished, surface of the body cold and pale, pulse smaller and weaker than in health, more or less head-ache, obtuse pain in the back or limbs as after fatigue, all which symptoms depend upon a diminished energy of the sensorial and nervous power, and clearly prove that the cerebro-spinal, or brain and nervous system are deranged, and hence most writers maintain that the brain and nervous system are primarily affected in all fevers. These symptoms may continue for three or four days, and constitute the first stage or period of debility; and now the system rallies, the *vis medicatrix naturæ*, or inherent power in the system to remove or combat all diseases, is exerted, and the state of re-action or excitement is induced, which may continue from the fifth or sixth to the twelfth or fourteenth day. During this period all the functions of the body are excited, the sensorial powers are active, there is increased head-ache, intolerance of light or sound, great restlessness and irritability, flushed face, rapid pulse, hot skin, great thirst, &c. This state corresponds to the hot stage of an intermittent, but is of longer duration; and the hurried circulation may induce congestion or inflammation in any part of the body predisposed to disease, and especially in the vascular organs, as the brain, lungs, liver, and abdominal viscera, the gastro-intestinal mucous membrane, spleen, kidneys, and uterus. Congestion or inflammation is therefore the consequence, and not the cause of fever*. Daily observation incontrovertibly proves that fever may go through its whole course

* The immediate cause of fever is supposed to be an unknown poison which primarily acts upon the brain and nervous system, and deprives them of the power of communicating to the body that supply of nervous and sensorial power which is necessary to maintain the secretions in health; all the organs become deranged in the order of their importance to the animal economy, the circulatory, respiratory, digestive, nutritive, muscular, secretory, and generative.

without inducing local inflammation, though this is a frequent complication. Inflammation will appear in different organs according to the predisposition of the patient; it will attack the brain in one, the lungs in another, the digestive system in a third, and so on. It often steals on imperceptibly, though in general it is well marked. The brain is most commonly affected, next the respiratory organs, and, lastly, the digestive. The complication of fever with local inflammation of vital organs renders the disease highly dangerous, and the treatment extremely difficult.

TREATMENT.—As a general rule, depletion is necessary, purgation, diaphoretics, refrigerants, local bleeding by leeches, arteriotomy, or cupping, and counter-irritation by warm turpentine, sinapisms, and blisters.

When the *brain* is affected, the most vigorous measures must be employed, such as in phrenitis, as the most rapid changes of structure take place in this organ. Bleeding from the arm should be employed as soon as excitement commences, in all cases in which there is a determination of blood to the head; and venesection must be repeated always from a free orifice, and in the erect or semi-erect position, until relief is obtained. The sooner it is performed in this class of fevers the better, for inflammation is most rapid, and if once established little can be done. In such cases the head should be shaved, and a column of cold water poured over it from a height of from two to ten feet. This is called the *cold dash*, and will succeed after copious abstractions of blood by repeated venesection and local bleeding have failed. (*Richter, Southwood Smith, Tweedie, Graves.*) The mode of application is as follows:—the patient is placed in a tub, and a man stands on a table near him, who pours upon the naked head, and as nearly as possible on one spot, a steady continued stream of cold or iced water, from a watering pot without a rose, gradually raising his hand to the greatest elevation. No degree of burning heat in the system, no intensity of pain, can resist this application. In about twenty minutes the heat disappears, the skin becomes cool, the face pallid, the features shrunk, the pulse reduced to a mere thread, and the

pain in the head, however violent, ceases. The patient is then wiped dry, and put to bed. Should the cerebral symptoms return, the same plan is to be repeated, and no ease will occur which can withstand a third application. This plan is also lauded by Dr. Graves, in hydrocephalus, convulsions of children, and apoplexy *.

When the *lungs* are implicated, and pneumonia or bronchitis present, the best remedy, after venesection, is the exhibition of tartarized antimony in large doses.

R. Aquæ destillatæ 3x;
 Antimonii tartarizati gr. ij;
 Syrupi papaveris 3ss;
 ——— croci 3iss;

Fiat haustus, secundis, tertiis vel quartis horis capiendus.

The Italian, French, and most of the English physicians, place more reliance on this remedy than on depletion. The editor can add his testimony in favour of its efficacy. Pulmonic affections complicated with fever are often overlooked, as they come on insidiously, and their nature can only be ascertained with accuracy by auscultation, and the other methods proposed for the exploration of thoracic diseases.

When the *gastro-intestinal mucous membrane* is inflamed in fever, which will be recognized by the existence of pain on pressing the abdominal parietes, and small hard pulse, the ordinary plan of treatment should be employed—venesection and leeching, with the application of warm turpentine over the part of the abdominal surface which is pained by pressure. The number of leeches must vary, according to the extent of the inflammation; from twelve to sixty or eighty may be ne-

* He condemns the application of leeches to the head, and arteriotomy, but advises leeches to the sides of the neck, or behind the ear, or cupping on the neck. The editor has delivered this opinion in his Lectures on the Practice of Medicine for some years, and also considered blisters to the temples or whole head productive of more mischief than benefit, in consequence of the irritation, and determination of blood they cause to these parts. Mr. Ware objected to the application of leeches round the eye for the same reason.

cessary. The exact number must be determined by the age and strength of the patient, and the stage of the disease. Tepid oil of turpentine applied after the leeching is an invaluable remedy; it causes an erythematic blush in a few minutes, and is an immediate counter-irritant. It must be used sparingly, as it produces severe burning pain; but this is almost instantaneously relieved by the application of a napkin wetted with cold water. This remedy is preferable to a blister, which may not act at all, or at all events not for hours, during which time the inflammation will proceed.

Every judicious practitioner explores the abdomen at each visit, to ascertain the existence of inflammation, meteorization, distended bladder, or utero-gestation.

When *diarrhœa* supervenes on enteritis, astringents are necessary, such as prescribed under the head of typhus gravior, p. 92; clysters of starch and laudanum are also valuable in severe cases.

Dysentery or intestinal hæmorrhage may occur after abdominal inflammation, or may alternate with constipation, and in such cases the acetate of lead with opium, and in the latter case castor oil, should be administered. In all hæmorrhages, unless when large vessels are ruptured, the combination of acetas plumbi and opium will prove the best remedy we possess. It may be given in this form, to the amount of ten grains daily, with perfect safety, as the editor can attest.

R. Aquæ destillatæ 3x;
Acidi acetici diluti 3ss;
Plumbi acetatis gr. i-iiij;
Liquoris opii sedativi ℥v;
Syrupi croci 3iss;

Fiat haustus, tertiâ vel quartâ quaque horâ capiendus.

Or,

R. Extracti conii gr. x;
Opii purificati gr. i;
Plumbi acetatis gr. iiij;

In pilulas tres divide, quarum capiat unam ter in die, superbibendo haustum ex acido acetico compositum, nisi supervenerit somnolentia.

The draught is the better formula.—*Editor.*]

SYNOCHUS ICTERODES.—YELLOW FEVER.

SYMPTOMS.—Weakness; lassitude; weariness; frequent chilliness; faintness; pains in the head and eyeballs; sighing; great tendency to coma; mouth clammy; tongue furred; pulse variable; skin hot, dry, and hard; bilious vomiting very frequent; yellowness of the eyes and skin; incessant retching and vomiting of frothy bile; peculiar delirium, attended with dilated pupils; great determination of blood to the head; occasional remissions of fever; extreme debility; petechiæ; large vibices; black vomit; dry and black tongue; teeth covered with a black fur; hæmorrhage, from mouth, ears, nostrils, or bowels; feeble and scarcely perceptible pulse; hiccup, &c.

CAUSES.—*Predisposing.*—The climate of the West Indies, Gibraltar, and America; hot and dry sultry weather; male sex; intemperance; depressing passions of the mind.

Exciting.—A contagion, produced from the effluvia of putrid animal and vegetable substances, recent exhalations acted on by a vitiated state of the atmosphere, and long continued dry and sultry weather. [No one believes this disease to be contagious at present.—*Gilcrest on Yellow Fever, Cyclopædia of Medicine*, 1832.]

TREATMENT.—The remedies must be accommodated to the type of the fever, which is mostly mixed in the beginning, and becomes exquisitely typhoid towards the height.

The early application of the most powerful anti-febrile remedies cannot be too strongly insisted on; these are, cold affusion, blood-letting, and purging.

1. The efficacy of cold affusion is very generally admitted. Dr. Dickson, whose “Directions to the Surgeons on the Leeward Island Station” cannot be made too general, gives his opinion thus: The momentum of the affusion, regulated by the earliness of the disease and the strength of the patient, should be considerable, when these will admit. The frequency of the repetition will depend upon the effects resulting, and the recurrence of re-action, heat, &c. The benefit to be ex-

pected from the shock will almost wholly depend upon its being given before the fever is fully formed ; but, although this is the case, the affusion in a less powerful degree should be assiduously repeated, at such intervals as the symptoms of reaction indicate ; and, when the vital powers become much impaired, gentle aspersion or ablution will produce grateful and soothing effects, and dispose to sleep, when the patient is heated, restless, or delirious. These will be farther promoted by cold applications to the head, after cutting off or shaving the hair : or, as the head is more accustomed to changes of temperature, it is probable that greater effect will be produced, by the application of cloths wet with spirituous or aqueous fluids to the epigastrium or other sensible parts.

A partial moisture upon the upper parts of the body, if the skin is hot, should not prevent the use of the cold bath, particularly in the early stages of this fever.

[There is little confidence placed in cold affusion in the yellow fever of the West Indies at present.—*Stevens on the Blood, &c.*]

II. The propriety, quantity, and repetition of bleeding, will depend upon the strength and fulness of the vascular system ; the oppression of the sensorial and other functions ; the youthful and unseasoned constitution ; the effects during and after the abstraction ; the ardent nature of the fever ; and, above all, upon the short duration of the disease. On the contrary, its employment will be more sparing, equivocal, or altogether prohibited in the weakly, aged, intemperate, long-assimilated, or previously-diseased habit ; and especially in an advanced stage of the disease. The efficacy of this remedy will greatly depend upon its being used as early as possible, particularly within the first twelve hours ; and although it may sometimes be extended to double that period, it should be understood that its too late or injudicious employment will infallibly hasten dissolution.

Under the most favourable circumstances, this remedy should be copiously used, and may be repeated according to its good effects ; but much will depend upon its being resorted to before the chain of the febrile actions is completely linked, and especially before the stomach and bowels have suffered.

III. The free exhibition of purgatives in this fever is indispensably necessary; and frequently, from the torpor of the bowels, they must be given with a liberality that might appear alarming in temperate climates. They ought to be repeated, and, if necessary, assisted with clysters, until they have produced at least five or six copious evacuations. The thorough evacuation of the whole of the intestinal canal during the first hours of the fever, cannot be too much insisted on.

The best purgatives are cathartic extract, jalap, &c. combined with calomel; and sometimes the stomach will bear the neutral salts: but those medicines ought always to be preferred which are the least likely to be rejected.

The bowels should be kept freely open during the whole period of the disease, but they should not be too much excited during the latter stage; a distressing diarrhœa, or constant attempts at evacuation with tormina, being a most harassing and unfortunate occurrence late in the disease.

If bleeding, purging, and the cold affusion, which mutually assist each other, are vigorously employed before the fever is fully established, the danger of the second stage will, most probably, be averted; and the most unpleasant symptoms diminish within the first twenty-four hours. The young practitioner is here, however, apt to be deceived:—it is very necessary to caution him against the appearance of a deceitful lull, which, like the calm preceding a storm, is often witnessed about this period, and to recommend his watching the disease with the most assiduous caution. If the patient be really better, the pulse and skin should not only become more natural, but the most distressing and unpleasant sensations should be much relieved, and his feelings altogether much more comfortable. If, on the contrary, an evident amendment or change be not perceived in the course of the second day, or if, after an apparent remission, the symptoms become aggravated, with anxiety, sighing, restlessness, nausea, or a particular disagreeable sensation at the stomach, the worst is to be apprehended, and every exertion used by mitigating the heat, general irritability, and particular symptoms, as they arise.

The means employed on the accession of the disease having

failed to cut short the fever, blistering must be had recourse to, in order to counteract and arrest the fatal changes taking place in the stomach and viscera; and simple but powerful stimulants must be exhibited internally, such as the carbonate of ammonia, wine if not nauseated, and spices.

R. Ammoniae carbonatis gr. vj;
Confectionis rosae caninae q. s;

Fiant pilulae duae secundâ vel tertiâ quaque horâ sumendae.

R. Ammoniae carbonatis gr. vj;
Pulveris baccæ capsici gr. iv;
Confectionis opii q. s;

Fiant pilulae duae secundis vel tertiis horis capiendae.

The capsicum may also be given in the form of what is called pepper-punch: this is much extolled for allaying vomiting.

When the approach of vomiting, or other dangerous symptoms, is apprehended, these remedies are immediately to be employed, without being deterred by the fever that is present; for if the reduction of heat and vascular action be waited for previous to the exhibition of stimulants, they will too frequently not be employed until the very changes to be prevented have taken place, and the patient is sinking into the grave.

To prevent the vomiting, which is of great consequence and difficulty, should farther be attempted by giving frequently a table-spoonful or two of arrow-root, or some other gelatinous or mild agreeable matter, according to the patient's fancy; but so little and often as equally to avoid total emptiness, or offending the stomach by quantity or quality.

Such is the plan of treatment strongly recommended by Dr. Dickson when the fever appears in its simplest and legitimate form, and attacks the youthful plethoric stranger, when he considers it as highly inflammatory in its first stage, with great determination to the stomach, viscera, and brain, which, if not immediately remedied, becomes a specific inflammation, running into organic diseases of those parts of the most de-

structive and irremediable nature, and terminating rapidly in disorganization, gangrene, and death. It is therefore evident that the result will greatly depend on reducing increased vascular action and the energy of the brain, and evacuating the whole intestinal canal in the first, and thus averting the danger of the second stage.

There are cases, however, in which, from constitutional causes, and a cachectic state of the system and other diseased states, this fever shows evident marks of the septic diathesis soon after its accession, and in such cases the lancet must be abandoned; the affusion of cold water resorted to if the increased heat of the body will permit; and after opening the bowels, acids, æther, and camphor must be given, with decoctions of the tonic barks and wine, or dilute brandy, as recommended against typhus gravior. [Dr. Stevens asserts that saline medicines are the only valuable remedy in this fever. He states that the mortality was immense at Trinidad before his arrival, but never so since. Dr. Hacket, on the other side, denies the efficacy of saline medicines in the disease.—For the formula of Dr. Stevens, see p. 94.]

Intermittent Fevers or Agues.

FEBRIS INTERMITTENS.—INTERMITTENT FEVER.

GENERIC CHARACTER.—A fever consisting of paroxysms or periods of fever, between each of which there is a perfect intermission, or period without fever.

Intermittent fevers are distinguished into *true* and *spurious*, *perfect* and *imperfect*.

The true and perfect intermittents which usually occur are, 1. The *Quotidian*, having an interval of 24 hours; 2. The *Tertian*, 48 hours; 3. The *Quartan*, 72 hours. When the revolution of an intermittent exceeds this time, it is *erratic*.

The other distinctions into spurious, imperfect, and many divisions of the more common forms are of no practical use whatever, *the mode of cure is the same*; and in all, the symp-

toms of the paroxysm are the same ; they differ from one another only in the period of the intermission or revolution.

The paroxysm consists of three stages, which follow each other with much regularity ; a cold, a hot, and a sweating stage.

SYMPTOMS.—Of the Cold Stage.—Languor and sense of debility ; listlessness ; yawning and stretching ; an aversion to motion. The face and extremities become pale ; the features shrink ; the bulk of every external part is diminished, and the skin over the whole body appears constricted, as if cold had been applied to it. Sensibility is greatly impaired ; the secretions and excretions are diminished ; the pulse is small, frequent and irregular ; and the respiration short and anxious. At length the patient himself feels a sensation of cold, first arising in the back, and thence diffusing itself over different parts of the body, though sometimes it is confined to a particular part, as to the extremities, side of the head, &c. This is succeeded by rigors, which terminate in an universal and convulsive shaking.

Of the Hot Stage.—After a longer or shorter continuance of shaking, the heat of the body gradually returns ; at first irregularly by transient flushes, soon however succeeded by a steady, dry, and burning heat, rising much above the natural standard. The skin, before pale and constricted, is now swollen, tense, and red, and possesses an unusual tenderness and soreness to the touch. The sensibility, which in the cold stage was diminished, now becomes preternaturally acute ; pains arise in the head, and flying pains are felt over different parts of the body. The pulse is quick, strong, and hard ; the tongue white ; there is great thirst ; the urine is high-coloured.

Of the Sweating Stage.—At length a moisture is observed to break out upon the face and neck, which extending soon becomes an universal and equable perspiration. The heat now descends to its usual standard ; the pulse is diminished in frequency, and becomes full and free ; the urine deposits a sediment ; the bowels are no longer constipated ; respiration is free and full ; and all the functions are restored to their natural order.

After a specific interval the paroxysm again returns, commencing as above described*.

CAUSES.—1. *Predisposing*.—Debility, however induced; by a watery, poor diet; great fatigue; long watching; grief; anxiety; the suppression of accustomed evacuations; the re-

[* The editorial explanation, given under the title Synochus, p. 97, will apply to the phenomena of the stages of intermittents. During the cold stage, we have manifest proof of the derangement of the functions of the cerebro-spinal system: all the functions are disordered, there is a determination of blood from the capillaries of the surface of the body to the deep-seated large vessels; there is congestion in the head, chest, and abdomen, and this has been repeatedly shown by necrotomic examination. The vascular spongy organs will suffer, if predisposed to disease, especially the spleen, liver, lungs, and brain. This view of the pathology of ague has led Dr. Mackintosh to employ venesection in the cold stage to relieve visceral congestion, and consequently to free the heart and brain from oppression, so as to enable the vis medicatrix naturæ to rally, and either to stop the cold fit at once, or to induce re-action. Depletion has produced this effect in a great number of cases according to Dr. M. The editor has also found it efficacious. When the phenomena of intermittent fever are repeated for weeks or months, they almost invariably injure vascular organs, and produce hepatic, splenic, pulmonic, cerebral, or hydropic disease. It is right to state that the recurrence of the paroxysm is dated from the commencement and not from the termination of the preceding fit. The tertian type is most prevalent, and occurs in spring; it generally commences at noon. The quartan is more severe, occurs in autumn, and its fit begins in general in the afternoon. The quotidian occurs in the morning, and most readily changes into the continued or remittent. The quartan has the longest cold stage, the tertian the longest hot stage. Each stage continues an hour or two, and the three are generally over in six hours. Students are often unable to account for the term tertian, as applied to a fever which recurs at the end of forty-eight hours. This difficulty is easily solved. Suppose the paroxysm commences about noon on the Monday and recurs at the same time on the Wednesday, forty-eight hours only elapse, but the period commences with the third day.]

pulsion of eruptions; preceding disease: cold, united with moisture, in whatever way applied to the body.

2. *Exciting*.—Marsh miasma; or the effluvia arising from stagnant water, or marshy ground, impregnated with vegetable matter in a state of putrefactive decomposition.

PROGNOSIS.—When the paroxysms are of short duration, when they are regular in their recurrence, and leave the intervals quite free, the disease, at least in our climate, is unattended with danger.

The circumstances giving rise to an unfavourable prognosis are—

1. The disease proving obstinate, and the paroxysms anticipating the usual time of their return, and there being a feverish disposition, manifesting tendency to a continued form of fever.

2. The paroxysms being of long continuance, violent, and attended with much anxiety and delirium.

3. The disease being combined with others; or other diseases being induced by a protracted state of the original intermittent. These are most frequently dysentery, cholera, enlargement of the liver and spleen, ultimately inducing dropsy and jaundice; swelling of the tonsils and glands.

4. The presence of unfavourable symptoms, as convulsions occurring during the paroxysm, preceded by great coma; obstinate costiveness; hiccup with vomiting and pain upon pressure in the hypochondriac and epigastric regions; depraved sense, as double vision; great prostration of strength; vertigo; dry, black tongue; foetid excretions.

TREATMENT.

In the Paroxysm.

Indications.—I. During the cold stage, to endeavour to induce the hot.

II. During the hot stage—to promote a perspiration.

The *first indication* [for the treatment of the *cold fit*] requires artificial warmth; the pediluvium; fomentations to the feet; the warm bath; warm diluent liquids; cordial dia-

phoretics ; and opiates. [The best remedy is blood-letting, according to Dr. Mackintosh.]

The common saline draught may be given every half hour, or one of the following :—

R. Liquoris ammoniæ acetatis f. ʒj ;
 Aquæ cinnamomi f. ʒjss ;
 ——— destillatæ f. ʒiij ;
 Syrupi croci f. ʒss ;

Fiat mistura, ejus capiat æger cochlearia duo magna bis terve in horas.

R. Liquoris ammoniæ acetatis f. ʒj ;
 Misturæ camphoræ f. ʒiijss ;
 Liquoris antimonii tartarizati f. ʒj ;
 Syrupi aurantii f. ʒss ;

Fiat mistura, ejus sumantur cochlearia duo ordinaria bis terve in horas.

R. Spiritûs ætheris nitrici f. ʒjss ;
 Misturæ camphoræ f. ʒivss ;
 Liquoris ammoniæ acetatis f. ʒj ;
 Syrupi rosæ f. ʒiij ;

M. ejus capiantur cochlearia duo magna quater in horas.

R. Spiritûs ætheris sulphurici compositi f. ʒjss ;
 Misturæ camphoræ f. ʒiv ;
 Pulveris ipecacuanhæ compositi ʒss ;
 Syrupi croci f. ʒiij ;

Fiat mistura, ejus sumantur cochlearia duo magna omnî horæ quadrantê.

R. Pulveris antimonialis gr. viij ;
 ——— cornu usti cum opio ʒss ;
 Sacchari purificati ʒj ;

Misce et divide in partes quatuor æquales, quarum capiat unam bis in horas.

R. Pulveris ipecacuanhæ compositi ʒss ;
 Potassæ nitratis ʒj ;
 Pulveris tragacanthæ compositi ʒjss ;

Misce et divide in pulveres quatuor æquales, quorum sumat unum bis in horas.

The *second indication* will be best fulfilled by the use of cold acidulated liquids, and continuing the remedies recommended during the cold stage, especially the æthereal ones.

The principal object in the treatment of the paroxysm of

an intermittent is, to put a period to the stage which is present, by inducing that which naturally succeeds it; till a free flow of perspiration takes place. To effect this in the generality of cases, little more will be required than the means above recommended. Should, however, the cold stage prove extremely severe, recourse may be had to a warm bath or an emetic, if this have not been administered before the commencement of the paroxysm.

[In the *hot fit*, the bedclothes are to be diminished, saline draughts, antimonials, and diaphoretics employed.

In the *sweating fit*, the patient must be kept cool, wiped dry after it is over, and his clothes changed. When there is much debility, he may have brandy or wine and water.]

Should there be, in the hot stage, a congestion of blood in the blood-vessels of the head, or delirium; cupping from the temples, or leeches, are to be applied, and opiates laid aside.

If there be any inflammatory diathesis, nitre is to be added to the medicines; and if any inflammation exist, it must be treated in the usual way.

If a comatose state supervene, give ammonia with camphor largely, and apply blisters.

R. Ammoniae carbonatis gr. vj;
Liquoris ammoniae acetatis f.3iij;
Misturae camphorae f.3xij;
Syrupi aurantii f.3j;

Fiat haustus secunda vel tertia quaque hora adhibendus.

Admoveatur inter scapulas emplastrum cantharidis amplum.

Adplicetur emplastrum cantharidis capiti raso.

Cataplasmata sinapeos plantis pedum applicanda.

[If coma depend on cerebral congestion, ammonia would be injurious:—the cold dash, as described in the editorial remarks on synochus, with head affection, would be the only remedy. See p. 99.]

In the Intermission.

Indications.—I. To excite a new action in the system by certain remedies, administered at the commencement, or immediately before the accession of the cold fit; and thereby to

destroy the morbid connection induced by the cause of the disease.

II. To prevent the return of the paroxysms by invigorating the body.

The *first indication* is answered by emetics, by æther, or by opium.

In the beginning of these, as well as of other fevers, it is necessary to clear the bowels, and the best time to do this is during the intermission: any common aperient may be administered.

R. Magnesiæ sulphatis ʒj;
 Infusi sennæ f. ʒvj;
 Syrupi aurantii,
 Tincturæ sennæ, aa f. ʒiv.

Fiat mistura, cujus sumantur cochlearia quatuor statim;
 et repetantur cochlearia duo omni bihorio donec alvus
 respondeat.

The emetic should be administered in the earliest part of the treatment, and in time for its operation to commence just on the accession of the fit. For a formula, see p. .

Opium should be given dissolved, and in a full dose, [about an hour before the cold fit, and increased to ʒiss, if this stage proceeds,] thus:

R. Misturæ camphoræ f. ʒxiij;
 Tincturæ opii f. ʒss;
 Syrupi tolutanti f. ʒj.

If the Spiritus ætheris sulphurici compositus be administered, the patient is to take a drachm undiluted. It deprives him of his breath, and excites great distress for a few seconds.

For the fulfilment of the *second indication*, recourse must be had to a nutritive diet; regular exercise, if the state of the patient render its use practicable; and one of the following tonics:—

1. *Cinchona Lancifolia*.—The Peruvian Bark. This heroic medicine is to be given in substance, and in large doses. If the interval be long, its exhibition should be delayed till within six or eight hours of the time of the accession of the

cold fit; should there be any inflammatory diathesis, this ought first to be reduced during the hot stage of the preceding paroxysms, by saline diaphoretics. Where there is great debility, the bark may be joined with wine and aromatics; if it occasion purging, with opiates and astringents; if costiveness, with rhubarb.

R. Pulveris cinchonæ lancifoliæ $\mathfrak{z}\mathfrak{j}$;
Divide in partes xij æquales, quarum capiat unam in horas,
vel secunda, vel tertia quaque hora, ex eyatho parvo
laetis vaccini recentis, absente febre.

R. Pulveris cinchonæ lancifoliæ $\mathfrak{z}\mathfrak{j}$;
———— cinnamomi compositi $\mathfrak{z}\mathfrak{ss}$;
Misee, et divide in chartulas xij.

R. Pulveris cinchonæ lancifoliæ $\mathfrak{z}\mathfrak{j}$;
Confectionis opii exsiccatae $\mathfrak{z}\mathfrak{j}$;
Misee, et divide in partes xij æquales.

R. Pulveris cinchonæ lancifoliæ $\mathfrak{z}\mathfrak{j}$;
———— rhei $\mathfrak{z}\mathfrak{i}\mathfrak{j}$;
Misee, et divide in partes xij æquales.

Of each of the above formulæ, the dose is one part every one, two, three, or four hours.

R. Pulveris cinchonæ $\mathfrak{z}\mathfrak{j}$;
———— cinnamomi compositi $\mathfrak{z}\mathfrak{ss}$;
Confectionis rosæ $\mathfrak{z}\mathfrak{j}\mathfrak{ss}$;
Syrupi rosæ q. s. ut fiat electuarium, cujus capiat ad
magnitudinem nucis moschatae quavis hora.

R. Decoeti cinchonæ f. $\mathfrak{z}\mathfrak{x}\mathfrak{i}\mathfrak{j}$;
Tincturæ ejusdem f. $\mathfrak{z}\mathfrak{i}\mathfrak{j}$;
Pulveris cinchonæ $\mathfrak{z}\mathfrak{j}$;
Syrupi zinziberis f. $\mathfrak{z}\mathfrak{j}$;
Fiat haustus omni vel secunda vel tertia vel quarta qua-
que hora sumendus.

R. Extracti cinchonæ gr. xv;
Decoeti cinchonæ f. $\mathfrak{z}\mathfrak{x}\mathfrak{i}\mathfrak{j}$;
Tincturæ cinchonæ compositæ f. $\mathfrak{z}\mathfrak{j}\mathfrak{ss}$;
Syrupi aurantii f. $\mathfrak{z}\mathfrak{j}$;
Fiat haustus quavis vel secundâ vel tertiâ vel quartâ qua-
que horâ sumendus.

SYRUPUS CINCHONÆ.

Syrup of Cinchona.

℞. Extracti cinchonæ 3ij.

Syrupi aurantii f. 3xiv.

Fiat syrupus.

This syrup is to be given to children when they refuse other forms of bark; it may be acidulated with sulphuric acid, which makes it very grateful to the palate. The dose is one tea-spoonful or more, every one, two, three, or four hours.

℞. Extracti cinchonæ cum resina 3j;

Fiat massa in pilulas xij dividenda, quarum capiat duas secundis, vel tertiis, vel quartis horis, superbibendo haustulum alicujus liquoris idonei.

Observe.—One ounce of good bark is generally sufficient to prevent a return of the fit, when given within the six hours which precede the attack:—one drachm the two first doses, and one drachm and half each succeeding hour; but the stomach often rejects this dose, and then more time is required*.

* [The sulphate of quinine is now preferred to any of the above formulæ; it may be given to the amount of ʒj or ʒss in the course of twenty-four hours; but in general much smaller doses are sufficient. An Italian professor (Speranza) has given 108 grains as a dose—the medicine must have been bad or it would have done great injury.

Professors Cooper, A. T. Thomson, and Graves, have found doses of two grains, three times a day, effect a cure in general; and professor Elliotson has found five grains every four hours effectual. He has used it in cases complicated with inflammation of the head, chest, and abdomen, and in chronic diseases of the lungs, liver, combined with dropsy, without doing injury or retarding the effects of antiphlogistic measures; but subsequent writers deny the accuracy of this statement, and declare that it has done great mischief. It has been mixed with eerate and applied to a blistered surface with success, in cases in which the stomach was irritable; and also rubbed on the gums with benefit; other remedies have lately been recommended as efficacious as quinine, and these are salicina, piperina, ilicina, and the alkali of carota; but

The bark of the *Cinchona oblongifolia* is equally efficacious with that of the *lancifolia*, and may be used in the same way, and in similar doses.

2. *Salix fragilis*.—This is called crack-willow; the bark is given in the same way, and in the same doses, as the Peruvian bark, but not with equal advantage.

3. *Cascarilla*.—This is very seldom employed, yet it is sometimes successful, and may be combined with cinchona in those cases in which Peruvian bark purges.

4. *Cusparia*.—This bark, better known by the name Angustura, is also administered in the same doses as the Peruvian bark, and in the same way. It is often serviceable when there is a weakness of the bowels producing diarrhœa, and especially when the cinchona cannot be made to agree with the gastro-intestinal mucous membrane.

5. *Swietenia febrifuga*.—This is said to cure agues: it may be given thus:

R. Swieteniæ contusæ ʒj;

Aquæ destillatæ f. ʒxviij;

Coque per horæ sextam partem et cola.

R. Hujus colaturæ f. ʒjss;

Tincturæ cinchonæ f. ʒjss;

Syrupi aurantii f. ʒj;

Fiat haustus secundâ vel tertiâ vel quartâ quaque horâ sumendus.

these have not been sufficiently examined as yet by the profession in this country. The dose of ilicina, or the alkali of the holly, is from six to twenty-four grains, and was found as efficacious as quinine by Dr. Rousseau of Paris.

The best mode of ordering quinine is the following:—

R. Confectionis rosæ ʒj;

Aquæ ferventis ʒiiss;

Acidi sulphurici diluti mʒj;

Quininae sulphatis gr. ij;

Tincturæ aurantii ʒj;

Fiat haustus secundâ vel tertiâ quaque horâ intermissionis tempore exhibeatur.

Salicina is given in the same dose as quinina; piperina is to be prescribed in the form of pill only: dose from one to ten grains.]

6. *Cinchona Jamaicensis*.—Dr. Wright of Jamaica gives the bark of this tree in the same way and doses as the common bark, and with the greatest success.

7 *Quercus*.—The oak bark and excrescences, called *gall-nuts*, are sometimes employed.

R. Corticis quercus exterioris contusi \mathfrak{z} jss;
 Aquæ ferventis f. \mathfrak{z} xx;
 Macera per horas duas vel tres, leni calore, dein cola.

R. Hujus colaturæ f. \mathfrak{z} jss;
 Pulveris gallæ gr. x;
 Tincturæ cardamomi compositæ,
 Syrupi aurantii, aa. f. \mathfrak{z} j;
 Fiat haustus secundâ vel tertiâ vel quartâ quaque horâ
 sumendus.

Bitter tonics, especially the following :

<i>Carduus benedictus</i>	.	.	Blessed thistle.
<i>Gentiana</i>	.	.	Gentian.
<i>Absinthium</i>	.	.	Wormwood.
<i>Anthemis</i>	.	.	Camomile.
<i>Quassia</i>	.	.	Bitter wood.
<i>Calumba</i>	.	.	Calumba.
<i>Faba Sancti Ignatii</i>	.	.	St. Ignatius' bean.
<i>Chironia centaurium</i>	.	.	Lesser centaury.
<i>Arnica montana</i>	.	.	Mountain arnica.
[<i>MELIA AZEDARACHTA</i>	.	.	Bead tea.
<i>Swietenia febrifuga</i>	.	.	Mahogany tree.
<i>Nerium anbetysentericum</i>	.	.	Tellicherry bark.
<i>Strychnos nux vomica</i>	.	.	Ratsbane.
<i>Prunus lauro-cerasus</i>	.	.	Cherry bay.
<i>Geum urbanum</i>	.	.	Avens.
<i>Lycopus Europeus</i>	.	.	Trater horehound.
<i>Smilax China</i>	.	.	China.]

9. *Potassæ arsenias*.—This forms the basis of Fowler's tasteless ague-drop. It cures the most obstinate intermittents, even when Peruvian bark fails, but it must be used with the greatest circumspection, it being a most active poison.

The liquor arsenicalis is the best preparation of it.

R. Liquoris arsenicalis ℥ vj;
 Aquæ cinnamomi f. 3xij;
 Tincturæ cardamomi,
 Syrupi zinziberis, āā f. 3j;

Fiat haustus sextis horis capiendus.

R. Liquoris arsenicalis ℥ vj;
 Tincturæ opii ℥ viij;
 Confectionis aromaticæ ʒj;
 Misturæ camphoræ f. 3xij;
 Syrupi aurantii f. 3j;

Fiat haustus ter in die deglutendus.

10. *Zinci sulphas*.—This is a most excellent tonic.

R. Zinci sulphatis gr. j;
 Infusi quassia f. 3vjss;
 Tincturæ calumbæ f. 3j;

Fiat mistura, cujus capiat æger cochlearia quatuor secundâ vel tertiâ vel quartâ quaque horâ.

R. Zinci sulphatis gr. ij;
 Decocti cinchonæ f. 3vijss;
 Tincturæ gentianæ f. 3ijj;

Fiat mistura, cujus sumantur cochlearia tria magna tertiâ vel quartâ quaque horâ.

R. Zinci sulphatis gr. iij;
 Extracti gentianæ duri ʒj;

Fiat massa in pilulas xij æquales dividenda, quarum capiat æger duas ter quatorve die.

11. *Hydrargyrum*.—Mereury is always necessary in the cure of intermittents when there is any visceral obstruction; a small dose should be given every night so as just to affect the mouth, and the tonic medicines are to be continued.

R. Hydrargyri submuriatis gr. j;
 Confectionis opii gr. vj;

Fiat pilula omni nocte capienda.

R. Pilulæ hydrargyri gr. iv;
 Extracti opii gr. $\frac{1}{4}$;

Fiat pilula singulis noctibus sumenda.

R. Hydrargyri oxidi rubri gr. j;
 Pulveris cornu usti cum opio ℥ss;
 Misce et divide in pulveres quatuor æquales, quorum
 sumat unum omni nocte.

R. Camphoræ ℥j;
 Unguenti hydrargyri fortioris ℥ss.
 Fiat unguentum de quo illinantur gr. x. omni nocte in
 extremitates.

[R. Olei camphorati ℥ij;
 Morphicæ acetatis gr. ij;
 Fiat embrocatio in usum.

[Morphia dissolved in oil is the best endermic sedative application.

Intermittents are not always produced by marsh miasmata; they attack some individuals who reside in the driest situations and were never exposed to the effluvium of marshes. There are numerous species of them, all of which are cured by the above plan of treatment. Persons who have recovered feel extremely indisposed in cold damp weather, from errors in diet, or mental emotions, and have frequently a relapse. From the foregoing plan of treatment, we may deduce the following conclusions:

That bleeding, emetics, or large doses of opium, will stop the cold stage; that quinine, either alone or combined, when the stomach is irritable, with opium, musk, camphor, cascarilla, or orange-peel, while in the 'apyrexial period, or intermission, prevents a return of the disease; and should this remedy fail, or should the stomach reject it, we may apply it with success to a blistered surface on the arm (Speranza, *Annal. di Med.*, 1828.), by the endermic method, or in the form of clyster; and, should it not arrest the disease, we then ought to employ salacina, peperina, or ilicina, or the various tonics already enumerated.

Dr. Jackson of Philadelphia advises ten grains of cobweb, that of the black spider, which is usually found in cellars, barns, and stables, as a substitute for quinine; and Dr. Dewees attests its efficacy.

The convalescent should wear flannel next the skin and warm clothing in cold weather, and avoid exposure to cold, moisture, abstain from indigestible food, and keep his mind serene and tranquil.]

FEBRIS REMITTENS.—REMITTENT FEVER.

CHARACTER.—A fever arising from the same *causes* as the intermittent; but in which, although evident and distinct exacerbations and remissions can be perceived, there is no complete interval or apyrexia, one exacerbation appearing not entirely to go off before a fresh attack ensues.

The *symptoms* vary according to the situation and constitution of the patient and the season of the year. Sometimes they are those pointing out a redundancy of bile; sometimes the nervous are most prevalent; at others the putrid.

The protraction of the exacerbations generally arises from some cause which keeps up an irritation in the system, and thereby prevents the disease assuming its regular form; or it depends upon fever of another type having been accidentally superinduced.

The *prognosis* will be drawn from the presence or absence of those circumstances which indicate danger in that particular form of fever which the disease assumes; and which are pointed out under the heads of the different species of typhus, synocha, or synochus. In warm climates it is often fatal.

TREATMENT.—The *treatment* will entirely depend upon the concomitant fever or other cause which prevents the state of apyrexia, and gives to the disease the remitting form. Should it have a tendency to either of the following genera, the treatment will be such as is there laid down; if it depend upon some cause of irritation, as diseased viscera, this is to be removed by the appropriate means elsewhere enumerated.

[This disease is seldom observed in this country, but is of frequent occurrence in Philadelphia, according to Dr. Dewees (*Practice of Physic*, 1830, vol. 1). He is a strong advocate for venesection during the paroxysm, when the pulse

and other symptoms require it. A mild form of this disease attacks delicate persons in the autumn, and is usually preceded by irregular action of the digestive organs, dyspepsia, flatulence, abdominal tension, or diarrhœa. It is called gastric fever by Professor Frank. The ordinary causes of fever induce it, as cold, damp, fatigue.

SYMPTOMS.—The patient complains of languor, lassitude, or drowsiness; has alternate chills and flushes, but no perspiration; skin hot and dry; thirst, nausea, or a total loss of appetite. The fever increases in the evening; there may be partial perspiration, but it is never critical. Sometimes the exacerbation or increase of fever occurs at noon, and sometimes in the middle of the night. When the disease is left to itself, it causes determination of blood to the viscera of the head, chest, and abdomen.

TREATMENT.—Active purgation, in which calomel must be employed, antimonials, refrigerants, &c. The disease usually continues for ten or twelve days.

[INFANTILE REMITTENT FEVER.]

In children this is a very common disease, caused by improper food, which induces irritation, inflammation, or ulceration in the intestinal canal. The child is feverish at a certain hour of the day; calls for cold water, refuses all solid food, picks its nose or lips, the last being covered with a brown fur; the alvine dejections are black, brown, white, green, or curdled. This disease is generally ascribed to worms and dentition. The first indication is to improve the secretions, by the exhibition of calomel or hydrargyrum cum creta with rhubarb or jalap, and to change the diet of the child. Animal food should be interdicted, as it is improper until the child has teeth to masticate it. The diet should consist of milk, arrow-root, sago, beef or veal tea, chicken broth, gravy of roast meat mixed with mealy mashed potatoes; and small and repeated quantities of these should be given at a time. The following remedies will generally effect a cure when the diet is regulated: the dose must vary according to the age and strength of the little patient:—

R. Pulveris rhei ʒi-ij;
 Hydrargyri submuriatis gr. vj-x;
 Pulveris cinnamomi compositi gr. vj-x;
 Sacchari purificati ʒi.

Divide in chartulas vj : detur una mane nocteque.

In mild cases, the hydrargyrum cum creta may be substituted for the calomel.]

FEBRIS HECTICA.—HECTIC FEVER.

This fever is, in almost every instance, a symptomatic affection. It differs from a continued, an intermittent, and a remittent fever; yet in some respects it resembles each, and approaches most to the last.

The febrile symptoms present themselves in obvious exacerbations, which begin with a sense of chilliness, which is succeeded by an increase of heat, an accelerated pulse, and these are followed by a perspiration. There are two exacerbations in the twenty-four hours. The first occurs generally about noon, and abates mostly in about four or five hours: this remission is but of short duration; a more violent exacerbation soon follows, which keeps increasing in violence until morning, when, about two o'clock, a perspiration breaks out which resolves the paroxysm.

The pulse, during the exacerbations, is generally strong, and beats from 96 to 120; the urine is high-coloured, and deposits the lateritious sediment: the cheeks are flushed, and have a florid, circumscribed redness; there is a burning heat in the palms of the hands and soles of the feet; in the periods of remission the pulse is mostly reduced in frequency, but seldom so low as in health: the appetite is not much impaired; tongue clean, moist, and red.

The bowels are generally costive at the beginning.

From the commencement of this fever the body wastes away, and in the advanced stage, the emaciation is very considerable indeed.

At length the fever becomes more continued, and the exacerbations more violent; the appetite falls off; colliquative sweats alternate with diarrhœa; the facies Hippocratica

is marked in the countenance: and under an increased severity of these symptoms, and those of the disease which causes the hectic fever, the patient sinks.

TREATMENT.—This must depend on the disease of which the hectic fever is symptomatic. If debility is the cause, or there is no apparent disease to produce the hectic symptoms, the medical treatment must be very similar to that of an ague, with a vegetable and milk diet. A course of sarsaparilla, with a mild or vegetable diet, now and then removes a hectic fever, the cause of which is not apparent. [Quinine often does good. In colliquative diarrhoea, the sulphate of copper with opium is the best remedy.]

This fever is generally supposed to arise from absorption of pus on large surfaces, as in suppuration of the lungs, liver, hip joint, &c. Dr. Mackintosh denies the accuracy of this opinion, and refers the disease to inflammation of the mucous membranes. The former opinion is unequivocally the most correct.]

Fevers have also been described by other names than those which have been enumerated.

1. From their seizing persons under particular circumstances, into *puerperal* and *milk fever*, &c.

2. From the situation of the person, into *camp*, *jail*, *hospital fever*, &c.

3. From the place in which they mostly occur: hence *Walcheren*, *Demerara*, *West Indian fever*, &c.

4. From some particular symptom, as *bilious*, *petechial fever*, &c.

5. From the season of the year in which they prevail: hence *vernal* and *autumnal fever*, &c.

6. From their being accompanied by some other disease, as *catarrhal*, *verminous*, *scorbutic fever*, &c.

These are either synocha, typhus, or synochus; and they observe either a continued, remittent, or intermittent form.

ORDER II.

PHLEGMASIÆ. INFLAMMATION.

GENERIC CHARACTER.

Synocha fever, with local inflammation and pain; the function of the part being injured at the time; the blood upon venesection exhibiting a buffy coat.

GENERA.

PHRENETIS, or inflammation of the Brain.

[MENINGITIS, Membranes of the brain.]

OPHTHALMITIS, Eye.

OTITIS, Ear.

GLOSSITIS, Tongue.

CYNANCHE, Throat.

PLEURITIS, Pleura.

[PLEURODYNIA, Bastard Pleurisy.]

PNEUMONITIS, Lung.

CARDITIS, Heart.

DIAPHRAGMATITIS, Diaphragm.

HEPATITIS, Liver.

GASTRITIS, Stomach.

ENTERITIS, Bowels.

PERITONITIS, Peritoneum.

SPLENITIS, Spleen.

NEPHRITIS, Kidney.

CYSTITIS, Bladder.

HYSTERITIS, Womb.

PROSTITIS, Prostate gland.

PODAGRA, Gout.

RHEUMATISMUS, Rheumatism.

[Inflammation may attack every tissue or part of the body, except the hair, cuticle, and nails, according to anatomists, though there is great reason to believe that these textures are not exempt, and facts are not wanting to prove that these parts may become diseased. Dr. Hooper does not describe many of the above inflammations, and the editor is not at liberty to introduce them in this edition.]

GENERAL CAUSES.

All the causes inducing local inflammation ; viz.

All mechanical, chemical, and nervous stimuli ; as external injuries by bruises, wounds, compression, &c. Irritation produced by the presence of extraneous bodies of whatever kind.

The application of cold or heat.

Any cause that determines an increased or irregular impetus of blood to the part ; as violent exercise, certain diseases, an inordinate influx of nervous energy.

All the causes inducing inflammatory fever. Vide Synocha.

GENERAL TREATMENT.

Indications.—I. To remove the remote causes when they are evident, and continue to operate.

II. To lower the strength of the vascular system in general.

III. To lower the tone, diminish the sensibility, and reduce the inflammatory action of the part in particular.

The remedies which fulfil these indications are called ANTI-PHLOGISTIC : they are as follow :—

The removal as much as possible of all those natural and other agents or stimuli, by which the circulation is supported.

[Depletion, large doses of tartarized antimony, as first recommended by Dr. Marryatt of Dublin, (Pract. of Physic,) purgatives, diaphoretics, and all other counter-irritants, are the remedies to be employed for this purpose.]

The most perfect quiet, and simplest diet of water with farinaceous substances and subacid fruits or juices.

Blood-letting, both general and local, [with nauseating or large doses of tartarized antimony.]

Purging, especially with the saline purges, as the sulphate of magnesia ; the sulphate of soda ; the tartrate of potass ; and the soda tartarizata.

Diaphoretics, especially the saline, as the citrate of potass ; the citrate of soda ; the acetate of ammonia ; the nitrate of potass ; the antimonium tartarizatum ; and the pulvis antimonialis.

Blisters and rubefacients.

Cold applications, as water, ice, snow, dilute vinegar, &c.

PHRENITIS. INFLAMMATION OF THE BRAIN.

SYMPTOMS.—Inflammation of the brain or its membranes begins with horror; immense anxiety and sense of tension referred to the head and breast; loss of memory; [absurdities of patient's behaviour and discourse, throbbing of the temporal and carotid arteries;] frightful dreams; nausea and oppression at the stomach; excruciating pain in the head; extreme sensibility to impressions of light and sound; peculiarly wild expression of the countenance; constant watchfulness. The face becomes flushed and turgid; the eyes stare, and seem as if starting from their sockets; ferocious delirium; tears sometimes burst from the eyes; sometimes there is profuse sweating from every pore, at others the skin is dry and burning; parched tongue; at first fiery red, afterwards becoming white, yellow, or black; peculiarly hard and rapid pulse.

Phrenitis generally terminates in stupor and insensibility; and if protracted, in great prostration of strength, symptoms of debility, [mania, idiotcy, lethargy, or effusion of the brain.]

CAUSES.—Exposure to excessive heats, or to vicissitude of temperature; as subjecting the head uncovered to the rays of a vertical sun; violent exercise; stimulant passions of the mind; intense study; the presence of irritating matter in the stomach; external violence; the abuse of spirituous liquors; [metastasis of gout, rheumatism, erysipelas, otitis, exanthematous fevers, small pox, measles, scarlatina, hooping cough; dentition; the repression of cutaneous affections, as those of the scalp; pneumonia, phthisis, renal affections, and all the febrile diseases.]

DIAGNOSIS.—*From mania.*—By the one being accompanied with violent fever, the other not; by the speedy termination

of the one, [on the third, fourth, or seventh day,] and longer duration of the other, [for weeks, months, or years.]

From the delirium of synocha.—In phrenitis, the delirium is the primary affection; in synocha, it is consequent upon the general fever. In synocha, the pulse is strong and full; in phrenitis, small, hard, and more rapid. Phrenitis terminates, when protracted, in symptoms like those of typhus; true inflammatory fever, most frequently in visceral inflammation.

From the delirium of typhus.—By the mode of the accession: the affection of the head in phrenitis comes on suddenly, and is extremely violent; the delirium of typhus is preceded by the characteristic marks of that disease, and is more moderate in degree. It is distinguished from the low muttering delirium often accompanying nervous fever by there being in this no symptoms of inflammation: the face is pallid, the eyes are dull, and all the features shrunk; the contrary is the case in phrenitis.

[Enecephalitis, cerebritis, or inflammation of the substance, may be idiopathic, or combined with meningitis or inflammation of the membranes of the brain.

In cerebritis the functions of the brain are speedily and primarily deranged; while in meningitis they are secondarily affected.

When cerebritis is general, there are tonic and clonic spasms of the muscles, carphology, subsultus tendinum or starting of the tendons, convulsions and cramps, rigid contraction of the limbs, and these attack all the limbs simultaneously; but when the disease is local or partial, some of the limbs only are affected. The action of the muscles and the sensibility are also partially but not permanently affected at first. In three or four days, these symptoms are succeeded by those of compression produced by effusion, as relaxation and immobility of the limbs; the senses are deranged or entirely abolished.

The symptoms already described are most urgent at first, and are followed in two or three days by those of compression. The premonitory symptoms are—sense of weight in the head, noise or tingling in the ears, deception of vision, scin-

tilations of light, change of colour of bodies, &c., irritability of the retina, numbness of one side, pain or pricking of the limbs; and these are followed by partial or general contractions of the muscles. There is pain in the head, usually referred to the side opposite to the inflamed one; sometimes the muscles of the limbs and face are contracted; one or both angles of the mouth are retracted, and the limbs may be flexed or extended. When collapse occurs, the muscles become flaccid and paralysed; the commissures of the lips, hitherto contracted, become pendent; the head and face are drawn to the sound side.

The muscles may become rigid after sudden paralysis with flaccidity, which is ascribed to the supervention of encephalitis after apoplexy, the parietes of the cavity containing the effusion having become inflamed.

When convulsions attack the unaffected side, unaccompanied by paralysis, there is arachnitis; and when paralysis succeeds, there is inflammation on the opposite side. When cerebritis succeeds arachnitis, especially at the base of the brain, as in children, one side of the body becomes paralysed. When the upper extremities are affected, the posterior fibres of the optic thalami of the opposite side are diseased; when the inferior extremities are disordered, the anterior half of the corpus striatum is implicated.

When there is paralysis of both sides of the body, the central portion of the pons varolii is disorganised. In cases in which paralysis, or muscular rigidity, is absent, and in which coma supervenes, there is inflammation of the corpus callosum, septum lucidum, or fornix.

When power of utterance is lost, the anterior lobules of the hemispheres are altered in structure.

In cases of encephalitis, accompanied by strabismus, rotation of the eye, contraction, immobility, and constant oscillation of the pupil on one side, the surface of the corpora quadrigemina of the opposite side is disorganized.

Loss of vision on one side depends on lesion of the pituitary gland, infundibulum and gray lamella of the opposite side. When the membranes of the eye lose their transpa-

rency, accompanied by paralysis of the organs of sense on one side, the ganglion of the fifth pair of nerves over the petrous portion of the temporal bone, or the corresponding walls of the fourth ventricle, are affected. Derangements of the circulatory, respiratory, and generative system, without paralysis of the limbs, depend upon lesion of one of the lobes of the cerebellum.

In arachnitis we observe spasmodic symptoms without paralysis; in hæmorrhage, sudden paralysis without spasmodic systems; in cerebritis, spasmodic symptoms, slow, progressive, or intermittent paralysis.

Anatomical characters.—A rosy or reddish colour in the part of the brain which was inflamed, vascular filaments: on incision through the affected part, we perceive a multitude of red points which cannot be removed by ablution, and do not afford blood on pressure, as in congestion. There is softening, or ramollissement, of the inflamed part; sometimes this part is so injected as to resemble the colour of port wine. When the disease suppurates, we find well-formed abscesses separated from the substance of the brain by newly-formed membrane; and the pus may be white, yellow, or greenish, scarcely emitting any odour, unless when the petrous portion of the temporal bone is carious, and then it will be foetid. The eineritious substance is the most common seat of cerebritis, and the corpora striata, optic thalami, the convolutions, pons varolii, and cerebellum are most frequently affected. It is right to state, that meningitis is often combined with cerebritis, and this disease must be described, though omitted in the former editions of this work.]

PROGNOSIS.—*Favourable.*—The appearance of a warm and equable perspiration, when the skin has been before constricted; diarrhœa; sediment in the urine; hæmorrhage from the nose; the pulse diminishing in frequency, and becoming more full and soft; the return of sleep and consciousness; inflammation attacking a less important part.

Unfavourable.—After ferocious delirium and constant watchfulness, the pupil of the eye becoming dilated, frothing at the mouth, grinding of the teeth, profound insensi-

bility, tremors, convulsions, involuntary evacuations; the face, from being flushed, suddenly becoming pale; suppression of urine; involuntary tears, or lachrymation; the urine of a dark red or yellow colour, or covered with a pellicle; the feces either bilious or white and very foetid; profuse sweats without affording relief; paralysis of the tongue or other parts; inflammation of other viscera, without diminishing the symptoms of the original disease; delirium changing to coma, while the pulse becomes weaker.

TREATMENT.—*Indication*.—To diminish the quantity of circulating fluids, and lessen the tone of the vessels, in the system in general, and in the head in particular.

I. By bleeding.—A copious and *sudden evacuation* of blood from the temporal artery, the jugular vein, the arm [or foot], which should be repeated frequently, proportioning the quantity to the age, sex, temperament, and habits of the patient:

Mittatur sanguis, pleno rivo, ad deliquium animi, et repetatur, manû liberâ, pro re natâ.

Topical bleeding also, from the head, neck, [anus,] or feet:

Admoveantur singulis temporibus hirudines quatuor vel sex.

[Leeches should be applied along the sagittal suture and to the sinciput, to relieve the longitudinal sinus, into which the cerebral veins discharge themselves.—(Costa.) Leeches applied indiscriminately over the scalp are objectionable. (See Synochus, with Cerebritis or Cerebral Congestion.) When encephalitis is symptomatic of gastro-enteric irritation, or inflammation, we direct our treatment to the intestinal canal.]

II. By purging; with neutral salts, or the submuriate of mercury in strong doses, so as to keep up a counter-irritation, and not to excite vomiting.

R. Sodæ sulphatis $\mathfrak{z}\text{j}$;
 Aquæ destillatæ f. $\mathfrak{z}\text{vj}$;
 Syrupi tolutanti f. $\mathfrak{z}\text{ij}$;

Fiat mistura, cujus capiat æger cochlearia quatuor omni bihorio donec alvus copiose respondeat.

R. Potassæ tartratis ʒiij;
 Pulveris rhei ʒss;
 Infusi sennæ f. ʒvj;
 Syrupi aurantii f. ʒss;

Fiat mistura, cujus sumat æger cochlearia quatuor secundâ quaque horâ donec bene purgaverit.

R. Hydrargyri submuriatis gr. x;
 Pulveris tragacanthæ compositi gr. v;

Fiat pulvis eatharticus ex syrupo adhibendus.

Or,

R. Gambogiæ gr. x;
 Pulveris jalapæ ʒj;
 [—— capsici gr. iv;]

Fiat pulvis eatharticus.

[**R.** Extraeti eoloeynthidis compositi ʒij;
 Hydrargyri submuriatis ʒj;
 Olei erotonis tigllii ℥ iv;
 —— menthæ piperitæ ℥ iij;

Fiat massa et in pilulas xij distribuenda, ex quibus sumantur duæ secundâ quaque horâ donec alvus copiose respondeat.]

3. By saline diaphoretics and refrigerants.

The saline draughts or mixtures directed for inflammatory fever, see pages 69 and 70.

The imperial drink, lemonade, and the like.

R. Potassæ nitratis ʒss;
 Liquoris ammoniæ acetatis f. ʒiij;
 Aquæ destillatæ f. ʒxij;
 Syrupi tolutani f. ʒj;

Fiat haustus diaphoreticus, quartâ quaque horâ sumendus.

R. Liquoris ammoniæ acetatis f. ʒiij;
 Misturæ camphoræ fortioris f. ʒx;
 Potassæ nitratis ʒss;
 Liquoris antimonii tartarizati ℥ x;
 Syrupi aurantii f. ʒj;

Misce pro haustu diaphoretico, quartâ quaque horâ sumendo.

4. By acrid pediluvium and semicupium; the application of vinegar and water to the head, previously shaved, or water

made colder by placing it in ice or snow, or the following evaporating lotion :

R. Liquoris ammoniæ acetatis,
 Spiritûs tenuioris,
 Aquæ, singulorum, partes æquales.
 Misce pro lotione, capiti raso, applicanda.

[The cold dash, as described p. 98, is the best remedy.]

5. By the application of blisters to the head, neck, and legs. [These are objected to in the first stage of the disease. —*Copland's Dictionary of Practical Medicine*, 1832.]

Applicetur, toto capiti raso, vel nuchæ capitis, vel suris externis, emplastrum cantharidis amplum, [vel cataplasma sinapis. The practice of blistering the head or neck is now generally abandoned.

Calomel, James's powder, and tartarized antimony, are strongly recommended in large and repeated doses. Mercurialization is considered one of the best remedies. Colchicum and calomel are combined in gouty and rheumatic complications with good effect. When there is erysipelatous or apoplectic combination, free incisions into the scalp over the occiput as first proposed by Soeffler. The disease may be symptomatic of gastro-enteritis in children, or of hepatitis in adults; and here the ordinary measures must be tried with local bleeding over the abdomen or liver. When encephalitis follows congestion, caused by narcotics, it is to be treated on ordinary principles. In some cases the most active depletion fails, and great prostration is produced; there are tremors, coma, irregular pulse, diminution of temperature, &c.; and we must exhibit ammonia, quinine, Hoffman's anodyne liquor, musk, and camphor.

Traumatic encephalitis is treated by the antiphlogistic measures and cold applications, as already mentioned. In this and other forms of the disease catheterism may be necessary. As soon as the irritation and febrile symptoms cease, the face being pallid, the pulse weak, small, soft, and frequent, collapse or coma evident, we should employ diffusible stimuli, as in the last stage of typhus or synochus. In a case with profound coma, Dr. Mackintosh poured boiling water re-

peatedly over the legs with success. We should likewise abandon depletion so soon as paralysis is succeeded by rigidity or spasm. When the symptoms abate, and paralysis remains after convalescence, it should be treated by counter-irritation, antimonial ointment rubbed over the origins of the affected nerves, by repeated blisters, moxas, issues, setons, or occasional cupping. When encephalitis is caused by morbid tumours or fluids in the brain, it can seldom or scarcely ever be removed.]

The most perfect tranquillity should be observed in the patient's room, all sounds and light excluded, and no food whatever be allowed during the inflammatory period, except barley-water, rennet-whey, gruel, sago, panada, arrow-root, or the like.

[Modern writers have endeavoured to distinguish meningitis from phrenitis, but it is admitted that this is impossible in the present state of science; nor is it important, as the treatment is similar for both. The following is the description of ancient writers.]

[MENINGITIS, PARAPHRENITIS, ARACHNITIS.

INFLAMMATION OF THE MEMBRANES OF THE BRAIN.

According to Fordyce and Cullen, the pain is acute in meningitis, and dull or obtuse in cerebritis. Pinel, Stoll, Morgagni, Vaidy (*Dict. des Sciences Med.*, art. Phrenitis), Dewees (*Pract. of Physic*), Mackintosh (*Pract. of Physic*), Abercrombie, and a host of others, deny the possibility of distinguishing one affection from the other; while Parent, Martinet, Rostan, and Copland hold the opposite opinion. All admit that the diagnosis between arachnitis and inflammation of the pia mater cannot be formed during life, and therefore both are included in the term meningitis.

SYMPTOMS.—Acute pain in some part of the head, exasperated at intervals; intolerance of light and sound; insomnia; flushed countenance; suffusion or redness of the eye; frequent, quick pulse; spasmodic twitchings or convul-

sions; sopor, coma, or delirium in adults; and complete relaxation of the limbs. The pain is often so violent as to compel children to scream in their sleep, and to roll their heads on the pillow; there is also knitting of the brows; and many of the symptoms of phrenitis are present in the adult, and those of hydrocephalus in children. The slightest noise is insupportable; the patient is irritable, the temperature of the head is greatly increased, and the febrile symptoms are very high. There is generally vomiting from the commencement of the attack in children, and is unattended with pain in the epigastrium: this symptom is absent in the adult. Convulsive and spasmodic symptoms supervene, and are speedily followed by those of collapse, subsultus tendinum, carphology, cramps, general relaxation, and death. In lymphatic or delicate persons, the disease is ushered in by prostration, disturbed sleep, loss of appetite, irritability of temper, slight febrile symptoms, and sudden invasion of stupor or coma.

When the disease is seated in the ventricles and base of the brain, as in children, the pain is referred to the forehead, temple, or occiput; and the head is often drawn backwards, which denotes that the part of the membrane covering the pons varolii is affected. Well-marked remissions occur in some cases, but these are speedily succeeded by convulsions or coma, and the last becomes permanent, the limbs relaxed, the pulse remarkably slow, and the pupils dilated. The symptoms differ in adults; there may be languor, insomnolence, inactivity of mind, instead of the spasmodic symptoms above described.

When the disease is seated on the convexity of the brain, the ideas are incoherent; the gait vacillating or unsteady; the limbs affected with tremblings; and when these symptoms come on slowly, the disease is chronic; but they will be followed, according to Bayle, with maniacal delirium, characterized by an "exaggeration of all ideas, especially those of ambition;" and this terminating in mental alienation, or idiocy, or in general paralysis, which may continue to increase for years, though the functions of respiration, circulation, and digestion are performed regularly.

Anatomical Characters.—The arachnoid membrane may be unchanged, if the disease had been of short duration, but cannot be separated from the pia mater, which adheres to it; but when the disease was severe, it will be opaque and thickened, according to Abercrombie, to a degree equal to the thickness of wafer, others say to that of the pleura, which Martinet denies, while Money (*Vademecum of Morbid Anatomy*, 1830,) states, that “it has acquired the density of the pleura, of the pericardium, of the dura mater, and even that of the coats of the stomach!” It may adhere to the pia mater, be opaque, or highly injected and inseparable from it, except in fragments or patches. In some cases a sero-purulent fluid or real pus is effused under the arachnoid, or this membrane may be covered with false membranes. It is seldom inflamed on its cranial surface. In some cases it is rough and slightly granulated; and this state must not be mistaken for the Paechionian glands, which are larger, more numerous, and whiter. The ventricles contain, in general, a serous, sero-sanguinolent, or sero-purulent fluid, and when these exist in children, there is ramollissement of the ventricular parietes. There may be effusion between the arachnoid membrane and pia mater, and adhesion between the latter and the brain at different points. The choroid plexus, corpora striata, and optic thalami may be covered with flakes of lymph. In some cases there is effusion of a limpid or turbid fluid at the base of the brain; the circle of Willis, basilar, and vertebral arteries may be coherent by bands of coagulable lymph, and even the lobes of the brain have been united in the same manner.

TREATMENT.—The treatment is the same as in phrenitis, and the first stage of hydrocephalus acutus.

Inflammation of the Dura Mater is generally produced by injuries of the head, and is rarely an idiopathic disease.

Ramollissement, or Softening of the Brain, may be caused by inflammation, or may occur without any symptom of cerebritis, fever, or even head-ache, especially in aged persons (Rostan). It is also ascribed to failure of the circulation in old persons (Abercrombie).

SYMPTOMS OF THE SECOND SPECIES.—Vertigo; diminu-

tion of the moral and intellectual faculties ; of perception, attention, memory, judgment, and imagination, followed by senile mental alienation, or great depression of spirits ; somnolence, prickings, numbness or twitchings of the limbs, and much difficulty in laying hold of small objects. The senses of vision, gustation, olfaction, and audition are more or less impaired.

These symptoms are succeeded by partial or hemiplegic paralysis, coma, and death.

TREATMENT.—Counter-irritation to the neck ; drastic purgatives ; tonics ; improvement of the digestive functions ; and escharotics, moxas, antimonial ointment, and galvanism over the origin and along the course of the nerves of the paralysed part.

There are numerous other disorganizations of the brain and its membranes caused by congestion or inflammation, and these are fully described in Dr. Copland's Dictionary of Practical Medicine, 1832.]

CYNANCHE TONSILLARIS. INFLAMMATORY SORE THROAT.

SYMPTOMS.—Rigors and flushing, succeeding each other, and terminating in the hot stage of an inflammatory fever ; during which inflammation is found upon the tonsils, uvula, and adjacent parts ; difficult and painful deglutition ; the voice becomes hoarse, sometimes almost lost ; sense of burning heat and lancinating pain in the throat ; copious excretion of viscid mucus and saliva ; in more severe attacks the eyes are inflamed and the cheeks swollen and florid ; pain in the ear, and not unfrequently deafness ; sometimes the inflammation, from being extremely florid, becomes of a dusky rose colour, and is soon interspersed with little whitish specks, which becomes small slough.

It terminates in resolution, in suppuration, or in gangrene.

CAUSES.—All those causes which induce inflammation in general, the application of cold to the neck, wearing damp

linen, sitting in damp rooms, getting wet in the feet, violent exertions of voice, blowing wind instruments, suppression of customary evacuations, acrid substances irritating the fauces.

DIAGNOSIS.—*From cynanche maligna*.—By the fever, which in the one is inflammatory, in the other typhoid; by the absence of ulceration.

From scarlatina anginosa.—See *Scarlatina anginosa*.

PROGNOSIS.—*Favourable*.—Those circumstances indicating resolution or suppuration, little fever, free respiration, deglutition not much impeded, the inflammation being of a vivid red colour, copious salivation about the fifth day.

Unfavourable.—Those circumstances indicating gangrene; which are, after unusual violence of pain, a sudden abatement; the tonsils, before turgid, moist, and shining, suddenly appearing dry, flaccid, unequal, and of a pale brown or livid colour; the inflammation becoming of a dull red, and interspersed with specks of a dark colour (as long as the specks continue white, little is to be apprehended from them); the pulse, from being strong, becoming small, weak, and irregular; the face, before flushed, now assuming a cadaverous appearance; clammy cold sweats, and cold extremities; fœtid breath; great anxiety; subsultus tendinum; foam in the mouth; coma, or slight delirium; the tonsils enlarging to such a size as to threaten suffocation. [Port wine used when influenza is epidemic prevents the disease, and all who neglect it are attacked.]

TREATMENT.—The *indications* are those for the treatment of inflammation in general.

Emetics are extremely useful in the beginning, before the febrile symptoms are very violent. The timely exhibition of an emetic often checks the complete formation of the disease.

R. Antimonii tartarizati gr. ij;
Sacchari albi ʒj;

Misce: fiat pulvis, in partes quatuor æquales dividendus, quarum capiat unam bis in horas donec probe vomat.

When the disease is not checked, the antiphlogistic regimen and diet must be enforced, and the inflammation attacked :

1. By blood-letting, general and local.

Mittatur sanguis e brachio, vel ex veno jugulari, ad animi defectionem.

Admoveantur hirudines quatuor vel sex parti affectæ.

Applicentur cucurbitulæ cum ferro sub aurem lateris affecti, et mittatur sanguis ad ʒiv. vel vj.

2. By blisters to the throat and back, and rubefacients.

Illinatur linimentum carbonatis ammoniæ vel linimentum camphoræ compositum in partem affectam, sextis horis.

Emplastrum cantharidis [vel cataplasma sinapis] collo imponendum quâ dolet.

3. By purging.

Pulvis purgans communis.

Haustus salinus purgans.

4. By diaphoretics, such as recommended against inflammatory fever.

5. By inhaling the steams of warm water, alone, or impregnated with vinegar, camphor, or æther.

6. By sedative or slightly stimulant gargles, [which facilitate the separation of viscid mucus from the fauces.]

R. Potassæ nitratis ʒij ;

Aquæ hordei f. ʒviij ;

Oxymellis f. ʒviij ;

Fiat gargarisma sæpe utendum.

R. Infusi rosæ f. ʒviij ;

Tincturæ myrrhæ f. ʒiij ;

Misce pro gargarismate, [quò fauces sæpe humectantur.

R. Infusi rosæ ʒiv ;

Mellis rosæ ʒj ;

Fiat gargarisma.

R. Boracis ʒij ;

Aquæ ʒviij ;

Mellis rosæ ʒj ;

Misce ut fiat gargarisma.]

R. Acidi muriatici f. ʒss;
 Aquæ hordei f. ʒviij;
 [Mellis rosæ ʒj;]

Fiat gargarisma.

If suppuration ensue, emollient cataplasms, warm emollient gargles, frequently inhaling the steams of warm water, early incision, [either internal or external.]

R. Caricarum incisarum ʒiv;
 Lactis vaccini f. ʒxij;

Coque per sextam horæ partem, dein cola pro gargarismate, tepide, utendo.

If a tendency to gangrene, the means enumerated under the head *Cynanche maligna* are to be used. [See p. 143.]

If danger of suffocation, scarifications of the tumefied parts [with a bistoury or trochar], inhalation of æther, bronchotomy.

The strength of the patient should meanwhile be supported by nutritious clysters of animal broths, thick gruel, or a solution of starch.

CYNANCHE MALIGNA.—PUTRID SORE THROAT.

[According to the Moderns, *Scarlatina maligna*.]

SYMPTOMS.—Cold shiverings, anxiety, nausea, vomiting, heat, restlessness, debility, oppression at the chest; the face is flushed, the eyes red, sense of stiffness in the neck, with hoarseness of voice, and sore throat; when, upon inspection, the whole internal fauces appear of a fiery red colour. This soon changes to a dark red, and becomes interspersed with a number of specks of a shade between a light ash and dark brown. In some cases, the first appearance which the fauces assume is that of a large, whitish-coloured stain, surrounded by a florid margin: the stain soon becoming an extensive slough. The tongue is covered with a thick brown fur; the inside of the lips is beset with vesicles, and a thin acrid

matter distils from the mouth and nostrils, excoriating the neighbouring parts; there is often a diarrhœa, and sometimes a constant discharge of an excoriating fluid from the anus; considerable fever, with an obvious evening exacerbation; small, frequent, irregular pulse; prostration of strength; coma or delirium; yet often, even when the disease terminates fatally, the patient is free from these symptoms, and continues to walk about until a few hours before his death.

About the *second* or *third* day large patches or stains appear about the neck and face, of a scarlet, or fiery red colour; which, upon inspection, are composed of small prominent papulæ. These, by degrees, become dispersed over the whole body, and after continuing for about four days, depart with a desquamation of the cuticle. [This disease is now considered scarlatina maligna.]

In bad cases the sloughs in the throat corrode deeper and deeper, and spread throughout the whole alimentary tube, or to the trachea; the symptoms of irritation continue to increase, gangrene supervenes, a severe purging comes on, and the patient expires; usually before the seventh, often as early as the third or fourth day.

CAUSES.—*Predisposing*.—Weak and relaxed habit of body; debility, however induced; autumn and the commencement of winter; long continued humid state of the atmosphere; it most frequently attacks children.

Exciting.—A specific contagion.

DIAGNOSIS.—It is distinguished from the preceding species of cynanche by the concomitant fever; in the one it is inflammatory, in the other typhoid. By the inflammation in the throat in one disease terminating in resolution or suppuration; in the other, in gangrene. By the absence of an eruption in the one; by its presence in the other.

From scarlatina.—See Scarlatina.

PROGNOSIS.—*Favourable circumstances*.—The fever moderate, and suffering a remission upon the appearance of the eruption; about the fifth or sixth day, the skin, from being parched, becoming moist and soft; and this followed by a diminution of febrile symptoms; the eruption of a florid red

colour, and diffused equally over the whole surface of the body; swelling of the tonsils has sometimes been attended with relief.

Unfavourable.—At the commencement of the disease severe head-aches, especially acute pain in the crown of the head; diarrhœa, coma, delirium, the eyes heavy and watery; the countenance either full and bloated, or pale, shrunk, and dejected; early prostration of strength; small irregular tremulous pulse, whether frequent or not; or full and unequal; small hurried anxious respiration, interrupted by sighs; the urine quite limpid, or very high coloured, and turbid; the fauces of a dark rose colour, with brown spots; an eruption of red pustules, or purplish blotches, foreruns the worst cases. Sores or issues assuming an ill appearance, the absence of an eruption, or its early appearance; the eruption suddenly becoming livid, or changing from a dark red to a pale colour; or altogether disappearing; when the countenance assumes a cadaverous hue, and convulsions supervene. Dropsical swellings; the ulcers, left after the separation of the sloughs, of a fiery red colour, or suddenly becoming covered with a black crust; the ceasing of the discharge from the mouth and nose; the evacuation of fæces of a dark or black colour; the inflammation spreading to the stomach and intestines, and producing symptoms of gastritis or enteritis; to the brain, inducing phrenitis or congestion; to the trachea, followed by a change in the voice, and other symptoms of cynanche trachealis. Hæmorrhages from the mouth, nose, or ears; fœtid breath; cold extremities; clammy sweats; hiccup, and death.

TREATMENT.—Indications.—I. To check the tendency to gangrene by supporting the strength of the system in general.

II. To promote the separation of sloughs; and to preserve a healthy state of the fauces.

III. To allay urgent symptoms.

1. By the liberal administration of antiseptics, especially quinine or bark, joined with spices and wine; it is more effectual when given in substance, if it do not purge. (See Synochus and Typhus.)

R. Pulveris cinchonæ ʒj;
 ——— cinnamomi compositi gr. iij;
 Confectionis aromaticæ ʒss;
 Tincturæ cinchonæ f. ʒj;
 Decocti ejusdem f. ʒxij;
 Syrupi zingiberis f. ʒj;

Fiat haustus, quartâ quaque horâ capiendus.

The formulæ prescribed against putrid fever are also proper.

If the skin be hot and dry, the bark should be joined with a diaphoretic.

R. Liquoris ammoniæ acetatis f. ʒij;
 Decocti cinchonæ f. ʒxij;
 Tincturæ cinchonæ f. ʒj;
 Confectionis aromaticæ ʒss;
 Syrupi aurantii f. ʒj;

Fiat haustus, tertiâ vel quartâ quaque horâ sumendus.

R. Ammoniæ carbonatis ʒss;
 Succii limonis q. s. ad alkali saturandum,
 Decocti cinchonæ f. ʒix;
 Tincturæ ejusdem f. ʒj;
 Confectionis aromaticæ ʒss;

Fiat haustus, tertiâ vel quartâ quaque horâ sumendus.

The diet should be thick gruel, barley-water, preparations of tapioca, Indian arrow-root, rice, sago, panada, with red wine or brandy. The ordinary drink wine-whey, negus, acidulated with the juice of oranges or lemons.

[The French rub the body with the tincture of cinchona, and convey nutriment into the system by clysters.]

The chamber of the patient should be kept cool, the floor often sprinkled with vinegar [or the chlorides of lime or soda, see p. 88], free ventilation, fumigations, by casting pulverized nitre over a chafing-dish containing live charcoal, or with oxymuriatic acid gas; all sources of putrid effluvia should be removed, and the patient's linen often changed. [The chlorides are now preferred, and should be sprinkled round the bed.]

Great attention ought to be paid to the state of the bowels; and irritating fæces should be prevented from accumulating by the occasional use of laxative enemata.

2. By stimulant, tonic, and astringent gargles; such are an infusion of capsicum, of roses acidulated, solutions of myrrh, of muriatic acid, [chloride of soda or lime], of a watery extract of bark in port wine.

R. Seminis capsici contusi ℥ss;
 Aquæ ferventis f. ℥viij;
 Mellis rosæ ℥iij;
 Tincturæ myrrhæ f. 5v;

Fiat gargarisma frequenter utendum.

R. Tincturæ capsici f. ℥ss;
 Mellis despumati ℥ss;
 Tincturæ myrrhæ f. 5v;
 Aquæ destillatæ ℥viij;

Misce pro gargarismate.

[The following gargle is very strongly recommended :

R. Pulveris capsici ℥ss;
 Sodæ muriatis ℥j;
 Aquæ bullientis Oss;
 Aceti ferventis ℥vi;

Misce in usum.]

R. Infusi rosæ f. ℥vj;
 Mellis ejusdem ℥vj;
 Tincturæ myrrhæ f. ℥j;
 Aëidi sulphurici diluti f. ℥j;

Misce pro gargarismate, in horas vel sæpius usurpando.

R. Extracti cinchonæ mollis ℥j;
 Vini rubri generosissimi f. ℥viij;

Fiat gargarisma.

[**R.** Querei corticis contusi ℥j;
 Aquæ fontanæ Oij;

Coque ad octarium, pro gargarismate.

Quinine is now substituted for cinchona.]

Should these be insufficient, the parts may be touched with the linimentum æruginis, with powdered myrrh or alum, by means of a camel-hair pencil, or with dilute muriatic acid mixed with honey.

R. Aëidi muriatici f. ℥ij;
 Mellis rosæ ℥xiv. Misce.

Quo partes gangrenosæ sæpe, ope penicilli, tangantur.

[R. Acidi sulphurici ℥xxx;
Mellis despumati ʒj;

Misee.

R. Chloruretri ealeis pulveris ʒj;
Aquæ rosæ Oj;
Mellis rosæ ʒij;

Fiat gargarisma, quo colluat os et fauces secundâ vel
tertiâ hora.

For other formulæ, see editorial article Synceus, p. 88.]

The inhalation of the steams of hot water impregnated
with myrrh, camphor, chlorine, or vinegar, may be had re-
course to.

[Sinapisms should be applied to the feet and insteps.]

3. Diarrhœa, by opium, and astringents, such as are ordered
against diarrhœa in nervous fever in page 92.

Violent vomiting, by the saline medicine in an effervescing
state, mild laxative enemas, opium joined with camphor.

HAUSTUS SALINUS EFFERVESCENS.

The effervescing saline Draught.

R. Potassæ carbonatis ʒj;
Aquæ cinnamomi f. ʒij;
—— destillatæ f. ʒviij;
Syrupi aurantii f. ʒj;

Fiat haustus, eum cochleare magno succi limonis, aetu
effervescentiæ, sumendus.

R. Misturæ camphoræ fortioris f. ʒv;
Spiritus myristicæ f. ʒj;
Liquoris ammoniæ acetatis f. ʒij;
Aquæ destillatæ f. ʒviij;
Tincturæ opii ℥v;
Syrupi rosæ f. ʒj;

Misee, fiat haustus, tertiâ quaque horâ hauriendus.

Passive hæmorrhages, by the internal administration of
powerful astringents: the external application of vinegar and
water, or a solution of alum, or of sulphate of copper, to the
orifices on lint.

R. Aluminis purificati 3j;
 Aceti communis,
 Aquæ puræ, singulorum f. ʒviij;
 Fiat solutio.

R. Cupri sulphatis 3jss;
 Aquæ puræ f. ʒviij;
 Spiritûs vini tenuioris f. ʒj;
 Fiat solutio.

Great care must be taken that this solution of blue vitriol do not pass into the stomach, for it is sure to excite vomiting and tormina of the bowels. [The acetate of lead and opium are the best astringents. See p. 100.]

Costiveness, by gentle laxative enemata.

CYNANCHE TRACHEALIS.—THE CROUP.

SYMPTOMS.—The disease generally creeps on imperceptibly, beginning with a hoarseness and wheezing, short, dry cough, and sometimes a rattling in the throat when asleep; the difficulty of breathing increases, and at length becomes indescribably anxious; the face is flushed and the veins of the neck varicose; the voice, in speaking and coughing, acquires a shrill and peculiar sound, similar to the crowing of a cock, or to the noise which a fowl makes when caught in the hand. The sound of inspiration at first resembles the passing of air through a piece of muslin; afterwards as through a metallic tube. At the commencement of the disease, the cough is dry; soon, however, a viscid matter is brought up, with portions of film or membrane of a whitish colour; and the efforts made to expectorate these are often so distressing as to endanger strangulation. It is accompanied with the symptoms of inflammatory fever. It most frequently terminates fatally about the second or third day, when the patient expires from suffocation.

CAUSES.—*Remote and predisposing.*—Its attack is mostly confined to children between the age of three and thirteen years. It is more frequent in low or moist situations, and on

the sea-shore. It may be induced by any of the causes of inflammation. It has been epidemic, and is by some supposed to be contagious.

DIAGNOSIS.—The peculiarity of breathing, of speaking, of coughing above described, are the pathognomonic symptoms.

From the convulsive asthma of children.—This disease attacks children of the same age, and is attended with symptoms much resembling those of croup. Distinguished by its consisting of repeated paroxysms, having an interval of twelve or fifteen hours; by the attack being more sudden, and not at first attended with fever, by being unattended with expectoration; by the respiration, though equally sonorous, having a much deeper sound. See p. 148.

PROGNOSIS.—*Favourable.*—Early and copious expectoration, the breathing not much impeded, the voice little changed, the febrile symptoms moderate.

Unfavourable.—Vast anxiety, anxious difficulty of breathing, violent fever, the sound of the voice becoming more acute, no expectoration.

TREATMENT.—*Indications.*—The same as obtain in all the phlegmasiæ.

They are best fulfilled by:

1. General and topical bleeding from the jugular vein, and by the *application of leeches to the larynx and trachea.*

2. Emetics in full and nauseating doses, especially ipecacuanha, squills, or tartar emetic, which is perhaps the most certain of all, and the least objected to by young persons.

R. Vini ipecacuanhæ f. ʒss;
Oxymellis scillæ f. ʒij;

Misce: cujus sumat æger cochleare unum minimum subinde.

R. Tincturæ scillæ f. ʒjss;
Oxymellis f. ʒv;
Aquæ destillatæ f. ʒjss;

Misce: capiat cochleare minimum omni hora.

R. Vini antimonii tartarizati f. ʒij;
 Aquæ destillatæ f. ʒjss;
 Oxymellis scillæ f. ʒss;

Misce: ejus sumat cochleare unum minimum subinde
 ad nauseam vel vomitum promovendam.

3. Cathartics of neutral salts or submuriate of mercury.

R. Magnesiæ sulphatis ʒij;
 Infusi sennæ f. ʒxij;
 Syrupi rosæ f. ʒij;

Fiat mistura, ejus capiat æger cochleare magnum pro
 re nata.

R. Hydrargyri submuriatis gr. ij;
 Pulveris antimonialis gr. iij;

Fiat pulvis catharticus ex syrupo potandus.

4. Blisters to the neck, kept open by the use of the unguentum cantharidis, or unguentum sabinæ.

5. Submuriate of mercury, so administered as to excite salivation, has been successfully employed, [and is one of the best remedies.]

R. Hydrargyri submuriatis gr. iij;
 Sacchari purificati gr. vj;

Fiat pulvis, tertiâ vel quartâ vel sextâ quaque horâ, ex
 quovis vehiculo crasso, deglutendus.

If the bowels be soon purged and the motions be green, the submuriate of mereury must be discontinued, and mercurial ointment rubbed into the thighs or axillæ, if the inflammation is not abated.

6. Strong decoction of senega, frequently taken into the mouth in small quantities, has been successfully used to promote a separation of the films or coagula.

R. Radicis senegæ contusæ ʒij;
 Aquæ puræ Oj;

Coque per horam diuiniâ, dein cola pro collutorio.

[Others recommend a strong solution of alum, or nitrate of silver; but the former is generally preferred. The danger of croup arises from the formation of a false or adventitious membrane, which may extend from the trachea into the bronchi, and become so thick as to fill the wind-pipe, and cause

suffocation. It has been expelled by vomiting, and resembled the finger of a glove.

The usual mode of treatment in cases of infants or children is the following:—

Venesection from the back of the hand or instep, the limb being immersed in a basin of warm water; leeches along the trachea, an emetic (antimonial or ipecacuan wine); warm bath; a sinapism to the throat for a quarter of an hour; and repeated doses of calomel. In infants leeching is generally successful; but should cerebral or pulmonary congestion supervene, we must abstract blood from the neck and thorax, place the patient in a warm bath when the brain is congested, and apply cold to the head. When there is bronchitis, we leech and blister the chest.

In either case sinapisms or blisters should be applied to the legs; and when children are affected, the former should not be left on longer than fifteen, twenty, or thirty minutes; and the latter about three hours.

The great danger arises from the formation of false membrane; and this is to be prevented by local and general bleeding, with the other remedies described. The blister should be applied along the trachea; and in bad cases, mercurial inunction over the angles of the jaws has been employed with success. When all fail, tracheotomy must be employed. Dr. Hamilton has given calomel in repeated doses to children, to the amount of one hundred and eighty grains, with success, and he advises it to be continued until the alvine dejections become green, like spinach.

SPASMODIC CROUP.—SPASMODIC ASTHMA OF CHILDREN.

Croupal respiration may supervene on cerebral diseases, and was designated by Dr. Clarke “a peculiar species of convulsion in infant children.” It is also described by Dr. Cheyne in his work on Hydrocephalus “as consisting in a crowing inspiration, with purple complexion, not followed by cough;” the muscles are rigid, the thumbs clenched in the hands, the extremities are

livid and swollen, and general convulsions supervene. It proved fatal in seven cases. Change of air and diet are strongly advised. This disorder occurs during sleep, the child starts suddenly, the respiration becomes laborious and difficult, the face purple, convulsions supervene, and death is produced by asphyxia. The best account of this affection is that of Dr. Marsh, in the Dublin Hospital Reports, 1830, v. 5, in which several cases are described under the terms, "A peculiar Convulsive Disease affecting Young Children, which may be termed Spasm of the Glottis." It was called spasmodic asthma of children by Miller and Parr. See p. 145.

TREATMENT.—Warm bath, cold to the head, while the child is in the bath, venesection, leeches to the larynx, ammoniated liniment to the base of the skull and neck. Change of air and of diet are strongly recommended, and during the violence of the paroxysm an infusion of five grains of tobacco leaves in six ounces of water was administered with the best effects. The disease occurred in three cases in a newly painted house. Dr. Marsh thinks the disease arises from irritation or vascular congestion at the origin of the pneumo-gastrie or eighth pair of nerves. Dr. Monro, in his *Morbid Anatomy of the Brain*, attests this pathology. The affection is most common in strumous habits. It is confined to the muscles of the larynx, and the treatment consists in improving the general health, and giving tone to the nervous system. The disease is described by Dr. Kellie of Leith (*Edinb. Med. Surg. Journ.*, 1816); by Porter on the Pathology of the Larynx and Trachea; Pretty (*Lond. Med. and Phys. Journ.* v. 45) and Richter, *Specielle Therapie*.

"The disease," says Dr. Marsh, "is essentially different from every form and variety of eroup; it is purely a spasmodic affection, and in all its stages is characterized by convulsive movements, partial or universal, and in its earlier stages all its symptoms will be aggravated, if it be confounded in treatment with any inflammatory affection of the larynx or air-tubes. I do not find it described in any systematic work in the English or French languages. I have treated numerous cases of this kind, and can also state that some infants have

croupal respiration, independently of this affection, or of common croup. I know children of a family affected in this way.”]

CYNANCHE PHARYNGÆA.—INFLAMMATION OF THE PHARYNX.

This differs from cynanche tonsillaris in the seat of the inflammation only. It is of the same nature, produced by the same causes, and requires the same treatment. [Sometimes the tonsils are implicated, at other times there is erythema on the faucial mucous membrane, extending to the larynx and causing laryngitis.]

CYNANCHE PAROTIDÆA.—THE MUMPS.

After slight symptoms of inflammatory fever, a swelling of the parotid and maxillary glands appearing externally; respiration and deglutition little impeded; sometimes a metastasis of the inflammation takes place to the breast of the female, and to the testis in the male; and the recession is not unfrequently followed by low muttering delirium, [congestion of the brain, and death.]

Cause.—Specific contagion [or exposure to cold.]

The treatment will be the same as in cynanche tonsillaris. Emetics are especially beneficial. Should inflammation of the breast or testis supervene, with delirium or stupor, blisters to the neck, sinapisms to the feet, fomentations to the parts affected. [See Synochus, Phrenitis.]

PLEURITIS.—INFLAMMATION OF THE PLEURA.

SYMPTOMS.—This disease is generally ushered in with chills, rigors, and the usual symptoms of inflammatory fever, accompanied, or followed, by a sense of weight in the chest, which in a few hours becomes acute pain, referred to the

side, about the sixth or seventh rib, and thence lancinating to the sternum or scapula. Cough takes place. The breathing is extremely anxious, and the pain is increased during inspiration; incapacity of lying upon the affected side; frequent, hard, contracted pulse, vibrating under the finger like the tense string of a musical instrument; white tongue, high-coloured urine, and other symptoms of synocha.

It mostly terminates in a few days by resolution, which is known by a free expectoration, a departure of the pain, and a gradual subsidence of the symptoms; or it produces inflammation of the lungs.

The causes, diagnosis, prognosis, and treatment, are the same as in pneumonitis. [But in some cases venesection, leeching over the seat of pain, and the application of cupping-glasses over the punctures, fail, and then large doses of tartarized antimony (see p. 153) with blisters succeed. In some cases all these remedies do not arrest the disease, and then musk, camphor, and æther have been successful.

In many cases false membranes or effusion of serum into the chest take place very rapidly, and then an emetic every third or fourth day, antimonial ointment over the chest, issues, setons, and the treatment for hydrothorax must be employed. Laennec condemns large doses of tartarized antimony in chronic pleuritis. When the chest is distended with serum, paracentesis is indicated. [See Hydrothorax.]

PLEURODYNIA, or muscular pain in the parietes of the chest, is often mistaken for pleuritis. It is unconnected with inflammation, and is merely neuralgic. It is aggravated by inspiration. It is not attended with fever or cough. It generally yields to anodyne frictions along the course of the intercostal nerves and over the corresponding part of the spine. In some cases a sinapism or blister is necessary, or cupping or leeches previously. It affects nervous, dyspeptic, rheumatic, or gouty subjects. The bowels should be opened, and antispasmodics and sedatives administered, with counter-irritation over the joint from which there has been a metastasis of rheumatism or gout. Pleurodynia may arise from disease in the spine, chest, abdominal viscera, spleen, esp-

cially as in chlorosis, amenorrhœa, and suppression of the menses, and also from syphilis. The treatment must be modified according to the nature of the complication.]

PNEUMONITIS.—INFLAMMATION OF THE LUNGS.

The symptoms are first very similar to those of pleuritis, but the pain is more obtuse, more under the sternum, more a sense of weight and oppression; the pulse is not so contracted. The difficulty of breathing is more constant; the face flushed, and sometimes of a purple hue. When it terminates by resolution, it is known by a free expectoration; the breathing becoming free, and all the symptoms gradually vanishing: this generally happens about the fifth or seventh day.

When the symptoms continue with no diminution beyond this period, it mostly induces suppuration, and this is known by severe rigors, the pain becoming more fixed, by a remission of previous febrile symptoms, and the accession of hectic, by the respiration becoming less painful but more oppressed; the patient lying with greater ease on the affected side, and these followed by the subsequent symptoms of empyema or vomica.

When the symptoms of pneumonic inflammation are protracted beyond the seventh day, and no symptoms of suppuration present themselves, the disease not unfrequently terminates by suffocation: prior to which, a sudden remission of fever and pain takes place without preceding rigor; the breathing becomes extremely anxious and laboured; the pulse sinks, the extremities become cold, and death ensues.

CAUSES.—Remote and predisposing.—Sanguineous temperament, vigorous and plethoric habit, winter and spring seasons, vicissitudes of temperature, all the causes inducing inflammation, violent exercise of body, or exertions of voice.

Exciting.—All the causes inducing inflammation in general.

vicissitudes of temperature, violent exercise of the body, or exertions of voice.

DIAGNOSIS.—[Auscultation affords the only test of the existence of this disease.

First Stage.—Crepitous râle, sound on percussion, healthy.

Second Stage.—When solidification has occurred, we can perceive no crepitating râle or the respiratory murmur in the affected part. The sound will be dull, but louder or puerile in the healthy part of the organ.

Third Stage.—When pus is formed, there will be the mucous or cavernous râle with pectoriliquism. Inflammation most commonly attacks the inferior lobe of the right lung, and seldom affects both lungs simultaneously.]

From hepatitis.—See Hepatitis.

PROGNOSIS.—*Favourable.*—An early and copious mucal expectoration, or tinged with blood of a florid red colour; spontaneous hæmorrhage from the nose; warm, equable, and free diaphoresis; diarrhœa; the appearance of inflammation on an external part, the urine depositing a sediment.

Unfavourable.—The duration of the disease beyond the fourteenth day, when suppuration or phthisis is to be apprehended: violent symptoms of fever with delirium; no expectoration, or the expectorated matter tinged with blood, or of a dark or black colour; sudden cessation of pain, followed by a change of countenance, and a sinking or irregularity of the pulse; the symptoms indicating suppuration or suffocation.

TREATMENT.—The *indications* are the same with those of the phlegmasiæ, and their fulfilment is to be attempted, thus:

1. By general and local bleeding.

Copious and sudden evacuations of blood from the arm, every four, six, or eight hours, according to the urgency of symptoms; [excessive depletion is highly injurious, and is now replaced by tartarized antimony.]

Extrabatur sanguis, pleno rivo, ad syncopen vel deliquium animi quamprimum, et repetatur pro re nata.

Admoveantur cucurbitulæ cum scarificatione ad partem thoracis dolentem pro re nata, et exsugatur sanguis ad ℥vii .

[Applicentur hirudines viginti thoracis parti dolenti et post fluxum sanguinis admoveatur cucurbitula sicca: dein imponatur emplastrum lyttæ.

Venesection should be repeated so long as the sound of the chest is imperfect, the *râle crépitant* audible, and the respiration laborious or embarrassed. Four or five bleedings may be necessary, provided the stethoscopic signs are our guide, and it is scarcely necessary to state that auscultation should be used daily, to ascertain the condition of the lung and the effect of treatment. There may be fever, though a small portion of the lung is only affected, but we must continue depletion, and even when the catamenia or loehia are present. The pulse may be small and weak at the wrist, though the action of the heart may be full and powerful; and in this case the radial pulsation will become full and soft after venesection. The exploration of the heart enables us to distinguish apparent from real debility in this and other cases. Laennec bled only once to ℥xvi , often omitted this remedy in weak and old subjects, and depended on large doses of tartarized antimony alone.

R. Infusi foliorum aurantii ℥iiss ;
 Antimonii tartarizati gr. i;
 Syrupi aurantii ℥iv ;

Fiat haustus, secundâ quâque hora exhibendus ad sextam vicem vel donec sedantur symptomata.

When the disease advances, the antimony is increased to two grains in each draught, and a drachm of syrup of poppies added. Some persons are vomited and purged by this remedy, and others are effectually relieved without any evacuation. In some cases, copious perspiration is induced. This plan is recommended in all stages of pneumonia, and the mortality under it is calculated at one in twenty-eight. It is now very generally adopted in this country. See Synochus with Pneumonia, p. 98.

In some cases the disease continues after the employment of all remedies, and under such circumstances the administra-

tion of ten or twenty grains of camphor, musk, or castor, during twenty-four hours, the free use of wine, bark, with warm bathing and affusion, remove all the symptoms.]—*Martinet*.

2. By a brisk purge at the commencement, and then by occasional aperients.

R. Hydrargyri submuriatis gr. v ;

Conservæ rosæ caninæ gr. v ;

Fiat pilula statim sumenda, superbibendo haustum sequentem.

R. Potassæ tartratis 3j ;

Infusi sennæ f. 3xv ;

Syrupi aurantii f. 3j ;

Fiat haustus.

The opening medicines prescribed against inflammatory fever are also proper. Great caution is requisite not to exhibit a drastic purge when the expectoration is going on freely.

3. By nauseating diaphoretics and expectorants.

R. Liquoris ammoniæ acetatis f. 3iij ;

Aquæ destillatæ f. 3x ;

Potassæ nitratis gr. viij ;

Syrupi aurantii f. 3j ;

Liquoris antimonii tartarizati ℥ xx ;

Fiat haustus.

R. Potassæ subcarbonatis ʒj ;

Succi limonis recentis q. s. ad ejus saturationem ;

Misturæ cumphoræ f. 3x ;

Pulveris ipecacuanhæ gr. ss ;

Syrupi croci f. 3j ;

Potassæ nitratis gr. vj ;

Fiat haustus.

One of these draughts is to be given every four hours ; and, if it fail to produce a perspiration, one of the following pills should be administered with each dose :

R. Hydrargyri submuriatis gr. $\frac{1}{2}$;

Pulveris Jacobi veri gr. iij ;

——— — scillæ gr. $\frac{1}{4}$;

Conservæ rosæ caninæ gr. iij ;

Misce, fiat pilula.

R. Pulveris ipecacuanhæ gr. j;
 ——— antimonialis gr. iiij;
 Hydrargyri submuriatis gr. $\frac{1}{2}$;
 Sacchari purificati gr. vj;

Fiat pulvis ex syrupo capiendus.

Should these means neither produce a perspiration nor expectoration, the dose must be increased, and assisted by pediluvium of warm water, or decoction of chamomile-flowers.

The following juleps and emulsions will also tend to promote the same effect, and will palliate the cough.

R. Aceti scillæ f. 5j;
 Oxy mellis f. 3vj;
 Aquæ menthæ viridis f. 3vj;

Misce: cujus sumat æger cochleare unum magnum subinde.

R. Aceti communis f. 3jss;
 Syrupi tolutani f. 7j;
 Aquæ destillatæ f. 3v;
 Vini antimonii tartarizati f. 3ss;

Misce: cujus sumantur cochlearia duo magna frequenter.

R. Potassæ nitratis 3j;
 Misturæ amygdalæ f. 3vj;
 Syrupi rosæ f. 3j;

Misce: sumat cochleare magnum subinde.

R. Decocti hordei compositi Oj;
 Potassæ nitratis 3ss;

Solve, et sumat æger cyathum parvum subinde.

When the violence of febrile action is somewhat abated, and the pulse continues very frequent, digitalis is of great use: it may be added to the common saline draught.

R. Liquoris ammoniæ acetatis f. 5iij;
 Tincturæ digitalis m. vj—xx;
 Syrupi rosæ f. 3j;
 Aquæ menthæ viridis f. 3x;

Fiat haustus quartis horis exhibendus.

4. By the application of blisters, fomentations, and cataplasms, to the chest.

When the symptoms of suppuration, or effusion, supervene, the strength must be supported,

By farinaeous food [gruel, barley-water, sago, tapioca, arrow-root], mixed with mild and diluted wine.

By eordial diaphoretics and bitters.

R. Ammonia carbonatis ℥ss;
Liquoris ammonia acetatis f. ʒj;
Mistura camphoræ f. ʒv;
Syrupi croci f. ʒv;

Misce: cujus liauriat æger cochlearia tria ordinaria secundâ vel tertiâ quaque horâ.

R. Ammonia carbonatis gr. v;
Spiritus ætheris nitrici,
Syrupi, singulorum f. ʒj;
Aqua menthæ viridis f. 5x;

Fiat haustus quartis horis sumendus.

If the pulse sinks, and cold and partial perspirations appear, and the countenance becomes sunk and cadaverous, æther and camphor will be proper, and wine must be given more liberally:

R. Spiritus ætheris sulphurici compositi f. ʒiij;
Mistura camphoræ fortioris f. ʒvjss;
Syrupi croci f. ʒss;

Misce: cujus sumantur cochlearia duo magna secundâ quaque horâ.

It sometimes happens that the febrile symptoms soon become typhoid; in such cases large doses of camphor with æther, or ammonia, senega, and serpentaria, have been found useful, and blood-letting prejudicial.

[In describing this disease, it has not been considered necessary to notice its three stages, as the treatment is the same in all. When pneumonia becomes chronic, we should employ a succession of blisters over the part of the lung affected, or insert an issue or seton, and the patient should avoid all exciting causes, as public speaking, much conversation, too much exercise, riding on horseback, and exposure to cold and damp. His diet should be mild and nutritious, light animal food, puddings, &c.; and he should wear flannel. Whenever circumstances permit, he should reside in the south of England or France; and when a relapse occurs, the depletory and antimonial remedies already enumerated must be employed.]

GASTRITIS.—INFLAMMATION OF THE STOMACH.

SYMPTOMS.—An acute fixed pain and sense of burning heat in the region of the stomach; sudden and great prostration of strength; small, hard, contracted, and rapid pulse; extreme anxiety; frequent hiccup; violent and painful vomiting; the pain is aggravated by the taking in of food, and by pressure; great thirst; vomiting; sometimes an erysipelatous eruption in the fauces, extending along the alimentary canal.

The disease terminates either

In resolution:—when the pulse becomes more soft and full, and the other symptoms gradually disappear.

In gangrene:—marked by a violent exacerbation of the symptoms, followed by a sudden cessation of heat and pain; the pulse becoming more rapid and intermitting; the utmost prostration of strength, flaccidity and coldness of the præcordia, delirium, hiccup, cold extremities; death.

In suppuration:—preceded by a remission of pain; increased sense of weight and anxiety; severe rigors.

CAUSES.—The sudden application of cold to the body generally, to the extremities, or to the stomach, as in drinking cold liquors while the body is preternaturally warm; the repulsion of eruptions; the operation of poison taken into the stomach; the translation of gout and other diseases; indigestible food; violent passions of the mind; [blows over the stomach; abuse of spirituous liquors; or the ingress of acrid bile, as in common or spasmodic cholera.

When the symptoms are slight, the mucous membrane of the stomach is affected; but in intense gastritis all the coats of the organ are implicated. The former is termed *erythema* of the stomach.]

DIAGNOSIS.—*From enteritis.*—By the seat of the pain ascertained by pressure; by the peculiar sense of burning heat in the epigastric region; by the more severe vomiting and hiccup.

PROGNOSIS.—*Favourable.*—About the third or fourth day,

the pulse becoming more soft and full, and diminishing in frequency; the pain gradually ceasing; the urine depositing a sediment; diarrhœa.

Unfavourable.—The disease continuing after the expiration of a week, with severe rigors, followed by a sense of weight in the region of the stomach. The symptoms marking the accession of gangrene.

TREATMENT.—*Indications.*—To reduce the inflammatory action in the stomach, and diminish its irritability:

1. By general and topical blood-letting.
2. The use of the warm bath; even until fainting come on.
3. Fomentations to the abdomen.
4. Blisters [or warm terebinthinate epithems] to the region of the pain.
5. By keeping the bowels open with large emollient clysters; [and purgatives by the mouth should be avoided.]
6. By mucilaginous diluents in very small quantities and often, especially linseed tea, barley-water in which gum acacia is dissolved.

[Mittatur sanguis ex largo vulnere donec æger pallescat vel languescat.

Admoveantur hirudines xx epigastrio et postea imponatur cataplasma sinapis, fots terebinthinæ, vel emplastrum lyttæ.

The patient should drink freely of cold or iced water, and cold applications may be placed over the epigastrium. Small doses of morphia or the other direct sedatives are also useful adjuvants.]

7. By saline diaphoretics.

R. Potassæ nitratis gr. vj;
Pulveris tragacanthæ compositi gr. xij;
Aquæ destillatæ f. 3xij;
Syrupi aurantii f. 3j;

Fiat haustus.

R. Potassæ subcarbonatis gr. xx;
Succi limonis recentis q.s. ad alkali saturandum;
Aquæ destillatæ f. 3vj;
Potassæ nitratis gr. viij;
Syrupi f. 3j;

Fiat haustus.

R. Infusi rosæ f. 3x;
Potassæ nitratis gr. viij;

Fiat haustus.

One of these may be given every three or four hours.

The saline draught, in the act of effervescing, every two or three hours.

The acidulated soda-water is also very proper; but during the whole course of the disease, it is advisable to administer as little as possible by the mouth, [but by the rectum.]

Should there be any difficulty in keeping the bowels open,

R. Sodæ tartarisatæ 3vj;
Misturæ amygdalæ f. 3vj;

Misce: cujus capiat æger cochlearia tria pro re nata.

[R. Olei ricini f. 3ij;
Decocti hordei 3v;

Fiat enema.

Some writers strongly advise opiates by the mouth and rectum:

R. Tincturæ opii 3ss;
Mucilaginis anyli 3vj;

Fiat enema.]

When symptoms indicating suppuration take place, opium may be given in small doses, to allay the irritability and pain of the stomach, and mild farinaceous nourishment: with light preparations of cascarilla, calumba, cinchona, or the bitters, to increase the strength.

If gangrene takes place, diluted wine must be administered frequently; then diluted brandy, æther, and camphorated medicines, as recommended in pneumonia.

It has been observed, that gastritis sometimes assumes a remitting form, and that it is occasionally attended by a typhoid pyrexia: in such cases, cinchona and acids are useful.

ENTERITIS.—INFLAMMATION OF THE INTESTINES.

SYMPTOMS.—Acute pain in the abdomen, increased upon pressure, and shooting in a twisting manner around the umbilicus; obstinate costiveness; tension of the abdomen [and

flexion of the inferior extremities]; tenesmus, or vomiting, as the inflammation happens to be in the superior or inferior portion of the intestine; the vomiting is generally bilious, or dark, fætid, and in some instances stereoraceous; pyrexia, slow, hard, contracted pulse, great prostration of strength, high-coloured urine. [The disease is seated in the mucous, muscular, or peritoneal tunie of the intestine.]

Its terminations are,

In resolution,—known by a *gradual* diminution of the symptoms, and a free evacuation of the bowels.

Ulceration,—which is very uncommon, and only known by the febrile symptoms remitting, by occasional pains and shiverings, purulent evacuations from the bowels, and tabes.

Gangrene,—marked by *sudden* cessation of pain and anxiety, the patient becoming calm and collected, while the countenance assumes a livid, and indescribably cadaverous hue; suppression of urine, hiccup, subsultus tendinum, delirium, convulsions, death.

CAUSES.—All the causes inducing gastritis, incarcerated hernia, volvulus, colic, indurated fæces, long-continued obstinate costiveness.

DIAGNOSIS.—*From gastritis*.—See Gastritis.

From colic.—By the one being accompanied with fever, the other not; by the peculiar pulse above described; by the pain in enteritis being increased by pressure, in colic alleviated.

From hepatitis.—See Hepatitis.

PROGNOSIS.—*Favourable*.—Gradual remission of pain and other symptoms; the abdomen becoming less tender to the touch; the pain changing its seat, and not confined to a particular part; the belly no longer obstructed, a warm equable sweat, the urine depositing a sediment, the pulse becoming more natural.

Unfavourable.—The symptoms continuing with occasional shivering or weight in the parts, which indicate the formation of an abscess. But the most unfavourable, and by no means uncommon, termination is in gangrene. This event, in some cases, takes place in a few hours from the commencement of

the disease; it is usually marked by a sudden cessation of pain, the lips become livid, and the countenance Hippocratic; the pulse sinks, and the extremities become cold.

TREATMENT.—*Indications*.—1. To allay the inflammatory action in the bowels.

II. To keep the bowels open.

These *indications* will be answered:—

1. By general and topical blood-letting, regulated according to the age, extent, and period of the disease, as in the other phlegmasiæ.

2. By the warm bath and fomentations.

3. By the frequent exhibition of purges.

[Pertundatur vena brachii et detrahatur sanguis pleno rivo usque ut liquerit animus.

Applicentur hirudines xx vel xxx abdomini, et postea foveatur abdomen. Oleo terebinthinæ calido.

Lecches are also applied round the anus.]

R. Olei ricini f. $\mathfrak{z}\mathfrak{j}$;
Aquæ hordei f. $\mathfrak{z}\mathfrak{i}\mathfrak{j}$;

Fiat haustus.

R. Olei ricini f. $\mathfrak{z}\mathfrak{j}\mathfrak{ss}$;
Vitellum ovi unius;

His rite terendo subactis, adde paulatim

Aquæ menthæ viridis f. $\mathfrak{z}\mathfrak{v}$;

Syrupi aurantii f. $\mathfrak{z}\mathfrak{ss}$;

ut fiant mistura aperiens, de qua capiat æger cochlearia tria omni bihorio donec alvus sit soluta.

R. Magnesiae sulphatis $\mathfrak{z}\mathfrak{vj}$;
Mannæ optimæ $\mathfrak{z}\mathfrak{i}\mathfrak{j}$;
Aquæ destillatæ f. $\mathfrak{z}\mathfrak{x}\mathfrak{i}\mathfrak{j}$;

Fiat haustus.

R. Potassæ tartratis $\mathfrak{z}\mathfrak{i}\mathfrak{i}\mathfrak{j}$;
Mannæ optimæ $\mathfrak{z}\mathfrak{j}$;
Aquæ destillatæ f. $\mathfrak{z}\mathfrak{vj}$;

Misce: cujus sumantur cochlearia tria magna tertia quaque hora, vel pro re nata.

R. Antimonii tartarizati gr. j ;
 Magnesie sulphatis $\bar{\zeta}$ j ;
 Aquæ destillatæ f. $\bar{\zeta}$ vjss ;
 Syrupi aurantii f. $\bar{\zeta}$ ss ;

Solve ut fiant mistura cathartica :—sumantur cochlearia tria magna quolibet bihorio donec alvus amplè purgaverit.

If these purges fail of opening the bowels, the more active must be employed, and also purging clysters in large quantities. [A drop of croton oil may be applied to the tongue, or two drops may be used in an enema.]

R. Hydrargyri submuriatis gr. ij ;
 Extracti colocynthis compositi gr. viij ;
 [—— opii gr. $\frac{1}{4}$;]

Fiant pilulæ duæ, secunda quaque hora sumendæ, cum dosi mixturæ aperientis, donec alvus respondeat.

R. Magnesie sulphatis $\bar{\zeta}$ jss ;
 Decocti avenæ tenuioris f. $\bar{\zeta}$ xx ;
 [Olei ricini $\bar{\zeta}$ j ;]

Fiat enema.

[When the vomiting is incessant and invincible, there is reason to suspect intuseseption, and then six or eight ounces of quicksilver should be swallowed, and this remedy is perfectly safe in cases of vomiting which defy all ordinary remedies.]

A grain of calomel and half a grain of opium may be given every two hours.]

4. By saline diaphoretics, with mucilaginous drinks similar to those ordered in gastritis. [Dover's powder is a valuable remedy.]

Some practitioners administer opium in the early stage of the disease, and speak decidedly of its good effects in abating the pain and inflammation, and rendering the subsequent use of cathartics more sure and salutary ; but the author's experience induces him to say it is a dangerous medicine, so long as any inflammatory action is going on, and especially before the free solution of the bowels. [The late Dr. Armstrong and Mr. Bates recommend large opiates, by the mouth and

rectum, in all abdominal inflammations as the best remedy. Dr. A. gave three grains of opium after the first bleeding, a grain after the second, and a grain after the third bleeding, an interval of six hours being left between each; while Bates advises a large opiate by the mouth, and 3j or ij with starch by the rectum: he relates numerous successful cases. The editor has observed narcotism supervene in abdominal and thoracic inflammation, but the disease proved fatal. Mercurial ptyalism is the best remedy in abdominal inflammations. The French apply blisters and sinapisms to the feet. Enteritis may become chronic, and in such case the antimonial ointment, or a blister, should be repeatedly applied to the abdomen, or lower extremities.

There is great danger of relapse after convalescence by exposure to cold, or by improper food.

When infants are affected, there is generally gelatinous softening.

When the mucous membrane of the stomach and intestines is affected, the disease is called gastro-enteritis.]

[PERITONITIS.—INFLAMMATION OF THE PERITONEUM.

Pyrexia, pain and tenderness of the abdomen increased by pressure, and the erect posture, with the peculiar signs of other abdominal inflammations.

SYMPTOMS.—The pain may commence in any part of the abdomen, as the peritoneum covers all the viscera in that and the pelvic cavity; at first is confined to a certain spot, but soon extends, more or less rapidly, all over the abdominal parietes, and is in general so acute that the pressure of the bed-clothes is intolerable, though in other instances it is so slight as to escape notice. It is also increased by pressure. The surface of the abdomen is hot and tender; the pulse is in general small, hard, and contracted, though sometimes full and soft; the countenance is expressive of anguish; the sufferer lies on his back with the thighs drawn upwards and almost

flexed on the abdomen; the bowels are constipated; the urine scanty and high coloured; the tongue is white and covered with mucus, is more or less dry, becomes brown, its edges and tip being red; the respiration is difficult, particularly during inspiration, and is chiefly thoracic, as the diaphragm and abdominal muscles cannot act without increasing the pain. When the disease advances without control, it often terminates fatally within twenty-four or forty-eight hours, and death is preceded by typhoid symptoms, great prostration of the vital powers, sudden cessation of pain, sharpened countenance, distension of the abdomen by gas or fluid, vomiting of a coffee-coloured fluid, cold extremities, and coma.

CAUSES.—Exposure to cold and fatigue; constipation, contusions, wounds, and surgical operations; lithotomy, incision for hernia, fistula in ano, improper use of obstetrical instruments.

TREATMENT.—The same as in enteritis, and in addition the application of warm turpentine to the abdomen after the leeching, and the induction of mercurialization by scruple doses of calomel with a fourth of a grain of opium every second hour in bad cases. Calomel is generally given in smaller doses, but the editor has administered it as here recommended in puerperal peritonitis with great success. The following combination is also highly valuable:

R. Olei ricini ℥j;
 — terebinthæ ℥iv;
 Mucilaginis acaciæ } āā ℥ij;
 Syrupi simplicis }

Fiat haustus tertiis horis si opus sit repetendus.

The mucous membrane of the intestinal tube is torpid, as is proved by constipation, and hence it may be made the seat of powerful revulsion. Hence it is now common to exhibit tartarized antimony in large doses, as in pneumonia, when there is no vomiting or gastro-intestinal irritation present.

Unless our treatment is energetic, albuminous adhesions, serous effusion, or gangrene, will speedily supervene.

When peritonitis proceeds from a penetrating wound of the abdomen, the case is formidable, though not invariably fatal.

(See the translation of the *Dict. de Médecine et Chirurgie Pratiques*, in the *London Medical and Surgical Journal*, v. i. 1832, article *Abdomen*; and also *Cooper's Surgical Dictionary*, article *Wounds*.)

As soon as tympanitis or meteorism appears, we should employ the following enemata:

R. Aquæ hordei ℥x;
 Olei menthæ piperitæ ℥iv;
 — terebinthinæ 3j;
 Tincturæ fetidæ 3iij;

Fiat enema tertiis vel quartis horis injiciendum.

When effusion has taken place, and the febrile symptoms abated, we must resort to those remedies capable of exciting absorption, which will be described in the article *Ascites*.

Peritonitis may become chronic, and continue for weeks or months, as all other inflammations of a chronic kind, and will be relieved by wearing flannel next the skin, a bandage round the abdomen, and other remedies which must occur to every educated medical practitioner. For account of chronic peritonitis, see article by Dr. Ryan, in the *Lond. Med. and Surg. Journ.*, 1831, v. vi.

Puerperal peritonitis is treated in the same manner, and is not malignant puerperal fever, as the superficially informed so generally imagine. The latter affection is proved beyond all doubt to depend upon uterine phlebitis, and the absorption of pus into the system. (See *Ryan's Manual of Midwifery*, third edition, 1831.) In that disease we can rely on mercurialization, opiates, and the internal and external use of oil of turpentine. Nine-tenths of the most renowned obstetricians of these and other countries attest the fact, and unanimously deny that copious depletion, either general or local, is a remedy for the disease. [In many cases of well marked malignant puerperal fever, or, as some will still have it, peritonitis, when all ordinary remedies had failed, a cure was effected by mercurialization. When fatal symptoms are present, calomel may be given in scruple doses every third or fourth hour, with small doses of opium.]

HEPATITIS.—INFLAMMATION OF THE LIVER.

Species.—1. *Hepatitis acuta.*—2. *Hepatitis chronica.*

SYMPTOMS.—The symptoms of the acute species are pain in the right hypochondrium, increased by pressure, often extending high in the chest, and resembling pleurisy; incapacity of lying upon the left side; dry cough: difficulty of breathing, and shooting pains in the chest resembling pleurisy; sympathetic pain in the right shoulder, the seat of which generally corresponds with the part of the liver most affected, being anterior or posterior, according as the anterior or posterior part of the liver happens to be implicated; and when the inflammation occupies the left lobe, then the pain is commonly in the left shoulder; a yellow tinge of the tunica conjunctiva, and sometimes actual jaundice; high-coloured urine, either costiveness or diarrhœa. In some instances there is a deficiency of bile in the intestines, when the fæces are of a clay or white colour; sometimes a superabundance, which is then rejected by vomiting and stool.

When the *concave* surface of the liver is affected, the pain is more obscure, and is referred to the back; the breathing is less anxious, the functions of the stomach more disturbed, producing vomiting, hiccup, and other symptoms of gastritis.

Hepatitis terminates either in *resolution*, about the fourth, seventh, or eleventh day; or in *suppuration* and abscess.

The attack of *chronic hepatitis* is in general so gradual, and the symptoms at its commencement so obscure, that it is long unattended to. It is marked by symptoms of dyspepsia, loss of appetite, flatulence, sense of fulness and distention of the stomach; at length the health is impaired, weight, and obtuse pain in the region of the liver, or more frequently referred to the back: the countenance becomes sallow; torpor and inactivity; dejection of mind; the functions of the primæ viæ greatly disturbed; obstinate costiveness; clay-coloured stools, seirrhus, dropsy, jaundice.

CAUSES.—All the causes inducing inflammation, biliary

concretions, irritations of acrid bile, the violent operation of emetics, external injury, passions of the mind, intense heat, intemperance in the use of spirituous liquors, [blows over the organ, or falls on the trunk, feet, knees, breech, which cause concussion, and often rupture of the liver or of its ligaments.]

DIAGNOSIS.—*From pneumonitis.*—By the pleuritic pain being less violent, and chiefly confined to the course of the phrenic nerve (ascending to the top of the shoulder); by the pain in hepatitis being increased by pressure, in pneumonia unaffected by it; by the difficulty, in pneumonia, of lying upon the affected side, while in hepatitis pain is occasioned by lying upon the opposite; by the sallowness of countenance; by the cough being generally unaccompanied with expectoration.

From gastritis and enteritis.—By the seat of the disease, discovered by tenderness upon pressure; by the sympathetic pains of the clavicle and shoulder; by the less prostration of strength, and greater fulness of pulse; by the colour of the stools and urine.

From dyspepsia.—See Dyspepsia

PROGNOSIS.—*Favourable.*—About the third, fifth, or seventh day, bilious diarrhœa; universal and free perspiration, copious sediment in the urine, inflammation appearing upon an external part, hæmorrhage from the hæmorrhoidal veins, these followed by an abatement of fever, and of other symptoms.

Unfavourable.—Intensity of pain and fever, the pain confined to a point; continual hiccup, cold extremities, while other parts are extremely hot; obstinate constipation. When hepatitis terminates in resolution, it is mostly in three or four days from its commencement; if it last to the seventh, there is great probability of its ending in suppuration. As soon as suppuration takes place, the pain remits, and there is generally a sense of weight and pulsation in the region of the liver, the former being increased by lying on the left side. These symptoms are attended with frequent and irregular shiverings, and at length with hectic fever. After an abscess has been thus formed, it may point in various directions; the matter may be discharged either into the intestines, the cavity

of the thorax or abdomen, or into the bronchi; or an opening may take place externally, [either on the abdomen or back], which is the most favourable.

Gangrene very rarely terminates hepatitis; when it does, it is known by the symptoms of mortification, already often mentioned.

In the chronic form, an enlargement, and preternatural hardness of the organ obvious to the feel; the constitution impaired by previous excesses.

TREATMENT.—The *indications* in the *acute species* are the same as in all visceral inflammations.

They are best fulfilled by :

1. General and topical blood-letting.

Most authors and practitioners have observed, that blood-letting ought not to be carried to the same extent in hepatitis as in the other genera of the phlegmasiæ. Some assign as a reason for this, the peculiarity of the circulation through the liver; others, that the organ affected is less essential to life; or that the inflammatory symptoms do not often run so high as in the other inflammations.

General blood-letting is seldom serviceable after the fourth day, but the state of the pulse and urgency of the pain must always direct.

[Admoveatur cucurbitula cruenta regioni hepatis, vel applicentur hirudines.

When the hæmorrhoidal or catamenial evacuations are suppressed, the abstraction of blood from the anus is preferable. The leeching should be repeated while pain is urgent.]

2. Blisters, applied to that part of the region of the liver in which the pain is.

3. Cathartics, especially submuriate of mercury.

R. Hydrargyri submuriatis gr. v;
Pulveris antimonialis gr. iij;
[—— cinnamomi compositi gr. ij;]

Fiat pulvis catharticus, ex syrupo sumendus.

4. Saline and antimonial diaphoretics, such as are recommended against an inflammatory fever.

When the antiphlogistic plan has been continued for five or seven days, and the symptoms do not abate, the submuriate of mereury must be given frequently.

R. Hydrargyri submuriatis gr. j;
Confectionis rosæ caninæ q. s.;

Fiat pilula sexta quaque hora sumenda.

Should suppuration take place, and an abscess form externally, it must be brought forward as quickly as possible by poultices and fomentations; a generous diet; the use of quinine, einchona, and bitters; and an early incision is to be made when it points. [Mereurialization may cause its absorption.]

The *chronic* species must be treated with:—

1. Mereury, both internally and externally applied, in small quantities.

R. Camphoræ gr. v;
Unguenti hydrargyri fortioris ʒj;

Fiat unguentum, in regionem hepatis alterna quaque nocte, illinendum.

[R. Iodinæ pulveris ʒj;
Potassæ hydriodatis ʒij;
Morphiæ acetatis gr. iv;
Unguenti hydrargyri fortioris ʒj;

Fiat unguentum ejus drachmâ fricetur regio hepatica nocte manequē.]

R. Hydrargyri submuriatis,
Sulphureti antimonii præcipitati, āā ʒj;

Terantur simul in mortario per horam unam integram ut fiat pulvis subfusus:

R. Hujus pulveris gr. j;
Confectionis rosæ gr. v;

Misce ut fiat pilula ter in die sumenda.

R. Hydrargyri submuriatis gr. j;
Extracti eonii gr. iij;

Misce ut fiat pilula ter in die capienda.

2. A continued course of bitter tonics and aperients, as taraxacum, gentiana, quassia, or calumba with soda.

R. Radicis taraxaci recentis excissæ ʒiij;
Aquæ destillatæ Ojss;

Decoque ad libram unam:

R. Hujus decocti colati f. ʒxiij;
Sodæ carbonatis gr. x;
Fiat haustus ter in die sumendus.

R. Extracti taraxaci gr. x;
Pulveris rhei gr. iv;
Fiant pilulæ duæ ter in die capiendæ, superbibendo haustum sequentem:

R. Infusi gentianæ compositi f. ʒiij;
Tincturæ gentianæ compositæ f. ʒss;
Aquæ menthæ viridis f. ʒx;
Sodæ subcarbonatis gr. iv;
Fiat haustus.

R. Infusi gentianæ compositi f. ʒxiij;
—— rhei f. ʒiij;
Tincturæ aurantii,
Syrupi ejusdem, āā f. ʒj;
Sodæ carbonatis ʒss;
Fiat haustus ter in die potandus.

R. Pulveris rhei;
Saponis duri,
Sodæ carbonatis exsiccatae, āā gr. iij;
Fiant pilulæ duæ ter in die capiendæ cum haustu sequente.

R. Quassiæ incisæ ʒij;
Corticis aurantii concisi f. ʒiij;
Aquæ ferventis f. ʒxvj;
Per horam integram macera, in vase clauso, dein cola:

R. Hujus colaturæ f. ʒxiij;
Tincturæ calumbæ f. ʒj;
Fiat haustus.

3. The *nitric* acid has been frequently of great use.

R. Acidi nitrici diluti m viij;
Aquæ destillatæ f. ʒxiij;
Syrupi simplicis f. ʒij;
Fiat haustus ter quaterve in die capiendus.

R. Acidi nitrici f. ʒj;
Aquæ destillatæ f. ʒxiij;
Syrupi aurantii f. ʒjss;
Fiat mistura quotidie sumenda, ope tubuli vitrei, partitis haustibus.

The chlorine or nitro-muriatic acid has of late been used.

in some cases with great benefit, both internally and externally.

R. Aquæ cinnamomi,
 ——— menthæ viridis, āā f.5vj;
 Syrupi aurantii f.3j;
 Misce, dein adijce;

Acidi muriatici,
 ——— nitrici, āā ℥ jss;
 Fiat haustus quater indies sumendus.

R. Acidi muriatici oxygenati f.3j;
 Aquæ menthæ viridis f.3xiv;
 Syrupi aurantii f.3j;
 Fiat haustus ter quaterve in die capiendus.

Removal from a warm to a cold climate is useful, and a sea voyage, [or a course of chalybeate waters.

The nitro-muriatic acid, pediluvium or manuluvium, is a valuable remedy, and acts as an aperient. It is also applied with a sponge over the region of the liver, thighs, legs, and arms. The following is the formula for this acid lotion, and may be used hot or cold:—

R. Acidi nitrici ʒiv;
 ——— muriatici ʒj;
 Aquæ puræ Oiv;
 Probe commisceantur in usum.

The editor has been informed by a respectable medical friend, that a scruple of subcarbonate of potash given three times a day, has frequently removed enlargement of the liver. When the intestinal canal is healthy, Martinet has found drastic purgatives remove induration of the liver, as if by enchantment, after all other remedies had failed. The internal and external use of iodine have also succeeded.]

NEPHRITIS.—INFLAMMATION OF THE KIDNEY.

SYMPTOMS.—Pyrexia; pain in the region of the kidney; the pain extends along the course of the ureter, and is accompanied with numbness of the leg and thigh on the affected side; retraction of the testicle; nausea and vomiting; high-

coloured, sometimes mucous, or bloody urine; micturition; dysuria, [or total suppression of urine.]

It terminates in resolution; in abscess; or in gangrene; known by the ordinary symptoms that accompany these terminations of inflammation in other parts.

CAUSES.—The common causes of inflammation; acrid diuretics; calculi or gravel in the kidney or bladder; external injury; long continued and violent exercise on horseback; collections of hardened fæces in the colon; retrocedent or atonic gout; violent exertions, strains, [diseases of the urethra, prostate gland, bladder, and ureters.]

DIAGNOSIS.—*From lumbago*.—By the seat of the complaint, discovered upon pressure; by the pain following the course of the anterior crural nerve; by the dysuria and micturition; by the pain not being increased upon motion of the muscles.

From gastritis.—By the seat of the pain, &c.—See symptoms of Gastritis.

PROGNOSIS.—*Favourable*.—Remission of pain, fever, and tension, followed by a very copious excretion of high-coloured, mucous, or purulent urine; universal equable perspiration; hæmaturia; if succeeded by a remission of symptoms; hæmorrhoids.

Although nephritis frequently terminates in suppuration, the ulceration formed in the kidneys does not materially affect the health, and generally heals, unless there is a seirrhous or serofulous diathesis.

Unfavourable.—Pale urine, secreted in small quantity; great micturition; dysuria; sudden cessation of pain, hiccup, delirium, cold extremities, severe rigors, and supervening hectic fever.

TREATMENT.—*Indications*.—The same as in the other phlegmasiæ.

They are to be fulfilled by—

1. General and local blood-letting; the latter either by the use of cupping-glasses, or by the application of numerous leeches to the region of the kidney [or perinæum.]

2. Oleaginous cathartics of castor oil, manna, or oil of almonds: frequent emollient elysters.

3. Mild diaphoretics, especially frequent and copious draughts of mucilaginous and diluent liquids, as barley-water, decoction of marsh-mallows, linseed-tea, with a little nitre.

4. Opiate clysters when the fever is somewhat abated and the pain excessive, [as starch and laudanum.]

R. Decocti hordei f. $\bar{3}$ vj;
Tincturæ opii f. $\bar{5}$ j;

Fiat enema.

5. The warm hip-bath, repeated according to the violence of the pain; and fomentations to the region of the kidney.

6. A decoction of the dried leaves of the amygdalus persica, the peach-tree, drunk in the quantity of a pint a day, has been found useful in this disease.

[Anodyne embrocations, as the camphorated oil and morphia applied over the region of the kidney when the acute symptoms have abated, may be tried with advantage. An issue or seton should be inserted in chronic cases. In dyspeptic subjects, assafoetida, æther, and opium, often afford relief. The alkalies, as soda, potass, and lime-water are useful, when the urine contains lithic acid; and the mineral acids when the phosphates are deposited.]

The treatment of nephritis differs very little from that of enteritis, with the exception of the use of blisters. These are generally considered as improper, because they frequently induce strangury, which mostly increases the inflammation of the kidney; but they have been applied with decided benefit in cases where the patients did not usually suffer from strangury. [The oil of turpentine fomentation is preferable.]

[A table spoonful of olive oil in syrup has often relieved pain, according to Martinet. The uva ursi and pariera brava in decoction, in the proportion of an ounce of each to a quart of water, are often beneficial. Dose $\bar{3}$ j twice or thrice a day.

R. Olei olivæ $\bar{3}$ ss;
Syrupi simplicis $\bar{3}$ j;

Fiat haustus tertia hora sumendus.]

CYSTITIS.—INFLAMMATION OF THE BLADDER.

Species.—1. *Cystitis acuta.*—2. *Cystitis chronica.*

SYMPTOMS.—Pyrexia, acute pain, tension, and tumour in the region of the bladder; pain and soreness, increased upon pressure, above the pubes, or in the perinæum; micturition, painful discharge of urine, in small quantities; or complete obstruction to its passage; tenesmus; vomiting.

In the chronic, the mucous membrane of the bladder, by repeated or continued irritation, produced by calculus, by stricture, by the disease of the prostate, or other cause, has become thickened, indurated, ulcerated; and pours out a large quantity of mucus and pus; which, added to the urine, gives to it the appearance of whey. There often is a discharge of blood.

CAUSES.—Mechanical injury; local irritation by calculus; the inflammation of gonorrhœa extended along the urethra; spasmodic or permanent stricture; all the usual causes of inflammation, [stimulant urethral injections, falls on the abdomen when the bladder is distended.]

TREATMENT.—The *indications* in the *acute* species are the same as in the other phlegmasiæ, and are to be fulfilled nearly in the same way:—

1. By general and topical blood-letting, the application of leeches to the perinæum and region of the pubes.
2. By oleaginous purges and emollient clysters.
3. The warm bath and fomentations.
4. The exhibition of opium with diaphoretics.
5. The other means recommended in nephritis.

[Catheterism must not be forgotten, and the instrument should be left in the bladder, unless it causes irritation. When cystitis is caused by cantharides, large doses of camphor and hyosciamus are valuable, and may be administered by the mouth and rectum.]

The *chronic species* yields mostly to stimulants, and injecting the bladder with emollient decoctions.

R. Copaibæ f. $\bar{3}$ ss ;
Vitellum unius ovi,
Sacchari purificati $\bar{3}$ j ;

His bene subactis terendo, adde paulatim
Aquæ menthæ viridis f. $\bar{5}$ vj ;
ut fiant emulsio, cujus capiat æger cochlearia tria magna
ter in die.

R. Terebinthinæ de Chio gr. iii ;
Saponis duri gr. iv ;
Pulveris calumbæ q. s. ;
Fiant pilulæ duæ ter in die sumendæ.

R. Saponis duri gr. iv ;
Extracti lactucæ gr. vj ;
Pulveris rhei q. s. ;
Fiant pilulæ duæ ter in die sumendæ.

[R. Camphoræ pulveris gr. iij ;
Extracti hyosciami gr. ij ;
Fiat pilula tertiâ, quartâ, vel sexta horâ sumenda.

R. Infusi buchu $\bar{3}$ vj ;
Tincturæ ejusdem $\bar{3}$ j ;
————— Cubebæ $\bar{3}$ iss ;
Liquoris potassæ $\bar{3}$ i ;
Syrupi aurantii $\bar{3}$ i ;
Fiat mistura cujus sumatur cochleare amplum ter in die.]

R. Resinæ flavæ gr. vj ;
Extracti conii gr. iij ;
Balsami Canadensis q. s. ;
Fiant pilulæ duæ ter in die sumendæ.

R. Olei lini recentis f. $\bar{3}$ ss ;
Liquoris calcis f. $\bar{3}$ iv ;
Misce pro injectione, per urethram in vesicam injicienda.

R. Amyli $\bar{3}$ ij ;
Aquæ ferventis f. $\bar{3}$ v ;
Tincturæ opii f. $\bar{3}$ j ;
Fiat injectio.

R. Liquoris plumbi acetatis f. $\bar{3}$ j ;
Aquæ destillatæ f. $\bar{3}$ iv ;
Tincturæ opii f. $\bar{3}$ j ;
Fiat injectio.

R. Liquoris plumbi acetatis f. ʒjss ;
 Olei lini recentis f. ʒss ;
 Liquoris ealeis f. ʒiv ;

Fiat injectio.

One half, or the whole of one of these injections, according to the capacity of the bladder, should be passed into it by means of an elastic gum bottle and catheter twice a day. [Civiale, Costello, and Heurteloup prefer decoction of marsh-mallows with laudanum. In chronic cases, the antimonial ointment should be rubbed over the pubes, or a blister applied, or a seton inserted in the perineum. It is important that the feet be kept warm by appropriate means.]

SPLENITIS.—INFLAMMATION OF THE SPLEEN.

HYSTERITIS. — — — UTERUS.

These diseases are characterized by inflammatory pyrexia, with tension, heat, swelling and pain in the regions of the viscera they occupy, which is increased on pressure.

In *splenitis*, it is the left hypochondrium, and the pathognomonic symptoms of nephritis are wanting.

In *hysteritis*, the tension and pain are in the hypogastrium, and do not arise from a distended bladder; the os uteri is painful to the touch; and there is often vomiting.

The causes and treatment are so similar to those of the different phlegmasiæ already considered, and more particularly to nephritis, that a repetition is unnecessary.

[Iodine used internally and externally has been found an effectual remedy for induration of the spleen. Lugol's formulæ are the best.—See Serofula.]

RHEUMATISMUS.—RHEUMATISM.

Species.—1. *Rheumatismus acutus.*—2. *Rheumatismus chronicus.*

SYMPTOMS.—*Of the acute.*—Lassitude and rigors, succeeded by heat, thirst, anxiety, restlessness, a hard, full, and quick

pulse, and all the usual symptoms of synocha ; sense of weight, and coldness of the extremities ; great restlessness ; obstinate costiveness ; after a short time (in the course of one, two, or three days), inflammation, with acute pain, tumour, and tension, makes its appearance in one or more of the larger joints of the body. The pain is transitory, shifts from joint to joint, and leaves the part it occupied swollen, red, and extremely tender to the touch. The pulse is full, and hard ; the blood, when drawn from a vein, exhibits the inflammatory surface ; the tongue preserves a steady whiteness ; the body is usually obstinately costive ; the urine high-coloured ; sometimes there is profuse sweating, unattended by relief.

Of the chronic.—The chronic form of rheumatism may be either a consequence and termination of the acute ; or it may be independent of it. In the first case, the parts which were affected with inflammation are left weak, rigid, in some instances cedematous ; and the pain, before moveable, is now usually confined to particular parts ; sometimes, however, it still shifts from joint to joint, but without occasioning any inflammation or fever. In the latter, from exposure to cold, or other cause, pains arise in the head, shoulders, knees, loins, wrists, or other parts ; which often continue for a considerable time, and at length go off, leaving the seat they occupied in a state of debility.

CAUSES.—Obstructed perspiration ; occasioned either by wearing wet clothes, lying in damp linen, or damp rooms, or by being exposed to cold air, after having been much heated by exercise. [The seat of the inflammation is still disputed.]

DIAGNOSIS.—The pathognomonic symptoms are, synocha, with pains and inflammation of the larger joints, under which the integuments become distended, smooth, and of a particular pale red colour.

From podagra.—By its generally attacking the larger joints only ; by the pain shifting its seat, and following the course of the muscles in its translation to other parts ; by the disease not having been preceded by symptoms of dyspepsia ; by its occurring at any period of life ; whereas gout is usually confined to the adult period.

PROGNOSIS.—*Favourable symptoms*.—A general, but not unnaturally profuse, perspiration; the deposit of a lateritious or furfuraceous sediment in the urine; eruptions on the skin; moderate hæmorrhage of florid blood from the nose or other parts.

Unfavourable.—The inflammation becoming erysipelatous, and assuming a dark red, or rose colour; and this followed by vesications, delirium, pale urine, metastasis of the inflammation to the head, chest, abdominal viscera, diaphragm; producing the symptoms of the idiopathic diseases of these organs.

TREATMENT.—*Of acute rheumatism*.—The indications are the same with those of the other phlegmasiæ, and are to be fulfilled :—

1. By general and topical *blood-letting*.

Most practitioners recommend general bleeding to be had recourse to in all cases where the vascular action is strong, the heat considerable, the constitution robust, and the patient not advanced in years; and they repeat it according to the violence of the symptoms, the firmness of the coagulum, and the appearance of the blood previously drawn: just as against acute inflammation of the viscera.

The reduction of vascular action is more particularly to regulate the repetition than the buffy appearance of the blood, which in many cases continues to increase, notwithstanding the abstraction of blood, and is not diminished by bleeding. Topical blood-letting by leeches, and cupping, is also directed by those who favour the abstraction of blood, when the disease produces considerable pain and tumefaction about a joint or limb.

Other practitioners are averse to bleeding in the cure of this disease, and never direct it generally or topically unless some internal part becomes affected. When the brain, the lungs, or any internal viscus is seized with pain in the course of an attack of acute rheumatism, the liberal abstraction of blood is universally recommended, and regulated precisely in the same way as against inflammation of those organs. [In most cases leeches should be applied over the joint, and afterwards a poultice sprinkled with laudanum.]

11. By occasional *purgatives* of sulphate of magnesia, sulphate of soda, tartrate of potash, the supertartrate of potash, rhubarb, senna, castor oil, and the submuriate of mercury, or any of the purgatives recommended against inflammatory fever.

111. By *diaphoretics*.—The antimonial sudorifics with opium are in general the most effectual in promoting perspiration and allaying the pain; but in mild cases the saline diaphoretics are sufficient, such as are recommended for the cure of inflammatory fever. To these opium is a useful addition when the pain is considerable; or one of the following formulæ may be used; [or large doses of tartarized antimony in delicate habits, or after depletion, are very much praised by many modern writers. The old plan of sweating patients by Dover's powder is now generally abandoned. Calomel and opium are used, but ptyalism must not be produced. Blisters are considered injurious in acute rheumatism. Quinine or cinchona is not depended on alone, but is useful when there is much debility or periodical return of the pain.]

R. Extracti opii gr. j;
Pulveris antimonialis gr. iij;
Confectionis rosæ caninæ gr. iv;

Fiat pilula quartâ vel sextâ quaque horâ sumenda cum haustu salino communi.

R. Extracti opii pulverisati,
Hydrargyri submuriatis, āā gr. j;
Pulveris antimonialis gr. iij;
Sacchari purificati gr. viij;

Misce pro pulvere, sextâ quaque horâ sumendo, ex quovis vehiculo crasso.

R. Pulveris ipecacuanhæ compositi gr. v;
Sacchari purificati gr. x;

Fiat pulvis sextis horis capiendus ex pauxillo mellis, superbibendo haustum communem salinum.

4. By *narcotics*.—The opiates already prescribed. *Conium*, *hyosciamus*, *aconitum*, *digitalis*, are sometimes employed with success, especially the first, with small doses of the submuriate of mercury, after having freely evacuated the bowels. *Hyosciamus* in conjunction with camphor.

R. Extraeti conii gr. v;
 Hydrargyri submuriatis gr. $\frac{1}{4}$;
 Fiat pilula quarta quaque hora sumenda.

R Extracti hyosciami gr. v;
 Fiat pilula quarta quaque hora capienda.

R. Extracti aconiti gr. j;
 Fiat pilula ter in die adhibenda.

R. Pulveris ipsecacuanhæ compositi gr. v;
 ———— tragacanthæ compositi gr. xij;
 Tincturæ digitalis ℥ x;
 Misturæ camphoræ f. 3xij;
 Syrupi croci f. 3j;
 Fiat haustus sextis horis adhibendus.

Digitalis, although it in most cases reduces the frequency of the pulse, does not in the same degree allay the pain, and sometimes it produces extreme debility, and no mitigation of the patient's sufferings.

R. Extraeti hyosciami,
 Camphoræ, āā gr. v;
 Fiant pilulæ duæ omnī sexta horâ capiendæ, superbibendo
 haustum sequentem :

R. Liquoris ammoniæ acetatis f. 3iij;
 Misturæ camphoræ f. 3ix;
 Tincturæ hyosciami ℥ xx;
 Syrupi rhæados f. 3j;

Misce pro haustu.

5. By fomentations of bitter herbs with poppy-heads, or any narcotic herb, as eonium, lactuca virosa, hyosciamus, or belladonna, and camphorated liniments, which are more useful when a limb or joint is principally affected.

R. Camphoræ ʒss;
 Olei olivæ optimi f. ʒij;
 Fiat embrocatio camphorata.

As soon as any remission can be perceived ; or where there has been much perspiration accompanied by a deposit or sediment in the urine ; or where the exacerbations of the disease have been from its commencement strikingly periodical, Peruvian bark is serviceable, either alone or with ammonia or guaiacum. [Quinine is the best preparation.]

R. Decocti cinchonæ f.3xiv;
 Extracti ejusdem gr. v;
 Tincturæ cinchonæ compositæ f.3j;
 Syrupi aurantii f.3j;

Fiat haustus quartis horis, in apyrexia, sumendus.

R. Spiritûs ammoniæ compositi f.3ss;
 Tincturæ cinchonæ compositæ f.3jss;
 Decocti cinchonæ f.3xiij;
 Syrupi rhæados f.3j;

Fiat haustus quarta quaque hora capiendus.

R. Tincturæ guaiaci ammoniatæ f.3j;
 Vitelli ovi quantum sufficit;
 Syrupi aurantii f.3j;
 Decocti cinchonæ f. 3xiij;

Fiat haustus quartis horis adhibendus.

Colchicum and veratrum are also esteemed by many in the cure of acute rheumatism. The best preparations are the extract of the seeds and the tincture of the root of the former, and the tincture of the root of the latter.

The mineral alkali has also been found useful, under similar circumstances, in combination with the tonic barks or bitters. The dose is ten grains of the carbonate of soda every four or six hours, with two ounces of the decoction of cinchona or cascarilla; or the same quantity of an infusion of calumba, gentian, granatum, chamomile, &c.

Of the chronic.—A great variety of remedies are exhibited against this species of rheumatism.

1. *Stimulants*: as guaiacum, ammonia, terebinthina, sinapis armoracia, arum, pyrethrum, [and colchicum.

This remedy is often effectual, after depletion and antimony have failed, and is now preferred to every other.

R. Aquæ menthæ piperitæ 3x;
 Vini colchici ℥ xx;
 Liquoris opii sedativi ℥ x;
 Magnesiæ calcinatæ gr. x;
 Syrupi aurantii 3iss;

Fiat haustus ter de die sumendus.

The solution of morphine is preferable to the sedative liquor of opium, but cannot be procured in the shops.]

R. Tincturæ guaiaci ammoniatæ f.3j;
 Pulveris acaciæ ℥ij;
 Misturæ camphoræ f.3xij;
 Syrupi aurantii f.5j;
 Fiat haustus ter in die sumendus.

R. Guaiaci pulverisati gr. vj;
 Pulveris antimonialis gr. iij;
 Syrupi zingiberis q. s.
 Fiat bolus ter in die capiendus.

R. Terebinthinæ de Chio gr. vij;
 Pulveris antimonialis gr. iij;
 Guaiaci pulverisati gr. iv;
 Miscee, secundum artem, ut fiant bolus ter in die sumendus.

R. Olei terebinthinæ rectificati f.3ss;
 Syrupi aurantii f.5ij;
 Ovi unius vitellum;
 Aquæ destillatæ f.3xij;
 Miscee pro haustu ter in die sumendo.

The best way of exhibiting the sinapis or mustard, and armoracia or horse-radish, is as they come to the table; they may be taken very freely.

The dried root of the arum maculatum and of the anthemis pyrethrum are generally given in powder, thus:

R. Pulveris radiceis ari gr. x;
 Fiat pulvis ter in die sumendus, ex parvo cyatho vini albi Hispanici.

R. Pulveris radiceis pyrethri ℥j;
 Fiat pulvis ter in die, ex vino albo Hispanico, sumendus.

[The oil prepared from the liver of the cod-fish has been extolled by Drs. Percival and Bardsley of Manchester. The dose is from one to three table-spoonsful daily. It is extremely nauseous and disagreeable, and sometimes fails to afford relief. Train oil is seldom used at present. There may be a metastasis of the disease to the pericardium or any part of the body, when depletion becomes indispensable, and counter-irritation over the joint in which the disease ceased. —See Pericarditis.]

2. *Alteratives*; especially sulphur, mercury, sarsaparilla, mezereon, dulcamara, and the narcotics.

R. Sulphureti antimonii præcipitati,
Hydrargyri submuriatis, āā gr. ss;
Guaiaci pulverisati gr. iv;
Syrupi zingiberis q. s;

Misce ut fiant pilula ter in die sumenda.

R. Hydrargyri submuriatis,
Sulphureti antimonii præcipitati, āā gr. ss;
Extracti conii gr. v;

Fiat pilula ter in die sumenda.

R. Pulveris antimonialis gr. iij;
Hydrargyri submuriatis gr. ss;
Extracti conii gr. iv;

Fiat pilula ter in die capienda.

R. Sulphureti antimonii præcipitati,
Hydrargyri submuriatis, āā gr. ss;
Extracti hyosciami gr. v;

Fiat pilula ter in die deglutienda.

With either of these, the simple or compound decoction of sarsaparilla may be taken in the quantity of half a pint daily, or the decoction of dulcamara.

R. Stipitum dulcamaræ contusarum ʒj;
Radici glycyrrhizæ contusæ ʒj;
Aquæ destillatæ Ojss;

Coque per quadrantem horæ, dein cola. Bibat æger libram dimidiam quotidie, partitis haustibus.

When sarsaparilla is given alone, a vegetable and milk diet assists, provided the constitutional powers will bear the abstraction of animal food. Sarsaparilla should be given in large doses: as an ounce of the powder in the twenty-four hours, or a pint of the decoction; and when these are objected to, one of the following:

R. Extracti sarsaparillæ ʒj;
Decocti sarsaparillæ f. ʒxiv;

Fiat haustus ter in die sumendus.

R. Extracti sarsaparillæ ʒj;
Decocti ejusdem compositi f. ʒxiv;

Fiat haustus ter in die capiendus.

[The fluid extract of sarsaparilla is now generally employed.

The extract is quite inert, and the decoction should be prepared by pouring on hot water, and keeping it the necessary time below the boiling point.—*Hancock, Trans. Medico-Botanical Society*, vol i., 1829. Quinine and the arsenical solution are beneficial when the disease evinces periodicity.]

3. *External applications*.—The simple warm bath, or tepid sea-water bath. A tepid bath with marine acid, in the proportion of one ounce to each gallon of water. Vapour baths.

Friction, alone or with salt brine, so as not to excoriate.

Stimulating liniments.

R. Olei terebinthinæ rectificati,
— olivæ optimi, āā f. ʒj;
Liquoris ammoniæ carbonatis f. ʒss;
Tincturæ opii f. ʒiij;

Fiat linimentum quod sæpe utatur.

R. Linimenti camphoræ compositi f. ʒjss;
Tincturæ opii f. ʒiij;

Fiat embrocatio, bis quotidie applicanda.

[R. Olei olivæ ʒiij;
Morphiæ acetatis gr. iv;

Fiat embrocatio.

This is the best anodyne embrocation.]

R. Linimenti saponis compositi f. ʒjss;
Liquoris ammoniæ carbonatis f. ʒiij;

Misce pro embrocatione.

R. Pulveris sinapeos ʒiij;
Aceti communis f. ʒxiv;

Fiat embrocatio.

R. Pulveris sinapeos ʒij;
Olei olivæ f. ʒvj;
— terebinthinæ rectificatæ f. ʒvij;

Misce pro linimento ter in die utendo.

R. Antimonii tartarizati optimè pulverisati ʒj;
Cerati ʒss;

Misce: cujus illinatur æger q. n. m. bis quotidie in partem affectam.

Or,

R. Antimonii tartarizati optimè pulverisati ʒj;
Linimenti saponis compositi f. ʒxv;

Fiat embrocatio bis in die utenda.

This tartar emetic ointment and embrocation have the property of producing a crop of pustules wherever they are rubbed, and when this effect is produced, they must of course be discontinued.

Blisters are likewise very serviceable against local pains.

Warm opiate plasters also :

Imponatur emplastrum picis compositum parti dolenti.

The emplastrum opii spread on leather and applied to the part; or,

R. Emplastri picis compositi ʒj;

Pulveris opii ʒss;

Fiat emplastrum parti affectæ admovendum.

[The extract of belladonna is also used as a plaister. Lugol praises iodine, and the editor can attest its value when the tendinous sheaths are thickened.

R. Iodinæ pulveris ʒj;

Potassæ hydriodatis ʒij;

Morphiæ acetatis gr. vj—x;

Adipis ʒj;

Fiat unguentum cujus pauxillo frietur pars affecta mane nocteque.]

R. Olei mæis ʒij;

Pulveris opii ʒss;

Misce, ejus illinatur pauxillum subinde in partes dolentes.

[The vapour bath or sudatory.]

Electricity, galvanism, and fomentations.

Acupuncture, or piercing the skin with one or several needles tied together.

Shampooing, which is lightly pinching or lifting up the skin over the affected part with the finger and thumb, an Indian luxury.

Warm clothing and a stimulating diet.

Covering the part with oilskin. [Covering the skin with flannel, cotton, or glazed silk, impregnated with some resinous substance.]

These are the principal remedies that are used in the present day: it would be an endless task to enumerate all that have been advised. Many were formerly employed that are

now fallen into disuse, and others are frequently starting up which have their run, and are then laid aside.

In all cases where there are any suspicions of the disease being connected with a syphilitic taint, the mercurial alteratives should be continued a long time, or mercury should be so administered as to affect the gums.

Whatever remedies are used, it will be absolutely necessary to persevere with them for a considerable length of time, in order to obtain from them the desired advantage.

[The patient should wear flannel next the skin for some months after recovery. The editor has known respectable persons who kept a small bottle of quicksilver, and others a piece of cane-brimstone in their pockets, as a cure for this disease. It is unnecessary to state, that these remedies are as useless as ridiculous.

Rubbing the affected limbs twice a day is often of signal service; but bandaging or percussion is seldom used at present.]

PODAGRA.—THE GOUT.

SPECIES.—1. *Podagra regularis*: with violent inflammation of the joints, enduring for several days, and receding gradually with swelling, itching, and desquamation of the part affected.

2. *Podagra atonica*: debility of stomach, or other internal part, and either without the expected or usual inflammation of the joints, or with slight and fugacious pain in them, with dyspepsia or other symptoms of debility often quickly alternating.

3. *Podagra retrograda*: with inflammation of the joints suddenly disappearing, followed immediately by debility of the stomach, or of some other internal part.

4. *Podagra aberrans*: with inflammation of some internal part, preceded or not preceded by inflammation of the joints, which quickly disappears.

SYMPTOMS.—*Of the regular gout*.—Dyspepsia, with its usual attendants, lassitude, torpor, and dejection of spirits; un-

usual coldness and numbness of the extremities, alternating with sense of pricking, or formication: frequent cramps; unusual turgescence of the veins of the leg. The paroxysm most frequently comes on about two o'clock in the morning, with excruciating pain, in the articulations of the great toe; succeeded by rigor, horror, and pyrexia. The pain continues to increase in violence, and having attained its acme towards the following evening, gradually ceases; a general moisture breaks out upon the skin, and the patient, freed from his torment, falls into a sound sleep; upon awakening from which he finds the parts, before painful, now swollen and inflamed. In several succeeding evenings, there is a return of pain and fever, which continue, with more or less violence, during the night, and go off at break of day.

Of the atonic gout.—When the gouty diathesis prevails in the system, but, from certain causes, does not produce the usual inflammatory affection of the joints, it often appears in the form of an atonic affection of some internal part. If it be in *the stomach*, there are pain, nausea, vomiting, eructations, dejection of mind, and other symptoms of dyspepsia and hypochondriasis; these are frequently accompanied with cramps in several parts of the trunk and upper extremities; sometimes there is obstinate costiveness, sometimes diarrhoea. If in *the viscera of the thorax*, it produces palpitation, syncope, asthma. When *the head* is affected, there is cephalalgia, vertigo; and apoplectic and paralytic affections are sometimes the consequence.

The retrocedent gout is where an inflammation of the joints has, in the usual manner, come on, but without arising to the ordinary degree; or, without continuing for the customary time, it suddenly and entirely ceases, while the disease is transferred to some internal part.—*To the stomach*; when great anxiety, sickness, violent pain, and vomiting, with peculiar sense of cold in the epigastric region, are induced.—*To the heart*; occasioning syncope.—*To the lungs*; asthma.—*To the head*; apoplexy, or palsy.

The misplaced gout is when the gouty diathesis, instead of

producing the inflammatory affection of the joints, produces an *inflammation* of some internal part; and which appears with the same symptoms that attend the inflammation of those parts, arising from other causes.

CAUSES.—*Predisposing and remote*.—The adult age, more especially the middle period of life; hereditary predisposition; melaneholie-sanguine temperament; full plethoric habit of body; indulgence in the use of animal food, fermented liquors, and venery; sedentary and studious life; the large use of acids and aeeseents; tartareous wines; dyspepsia.

[Sir C. Scudamore has proved, that in a number of patients the majority had no hereditary predisposition. It is also a well-known fact, that gout affects the poor as well as the rich. It seldom occurs before the age of twenty, or after sixty.]

Exciting.—The application of cold to the extremities; fatigue; anxiety of mind; excessive evacuations; sprains; intemperance of whatever kind; the ceasing of usual labour; the sudden change from a very full to a very spare diet.

DIAGNOSIS.—*From rheumatism*.—By the previous dyspeptic symptoms; by the pains, in the one disease attacking the smaller, in the other the larger joints. By the peculiar mode of its attack (see Symptoms); by its not being preceded, or accompanied at its commencement, with symptoms of synoecha; by the age of the patient.

PROGNOSIS.—*Favourable*.—Youth, and an unimpaired constitution; the more severe the paroxysm, the shorter its duration; the longer the intermission, the more effectual is it in removing various anomalous diseases, to which the patient had been before subject; its not being hereditary.

Unfavourable.—Impaired constitution; concomitant visceral affections; hereditary predisposition to the disease; the deposition of chalky matter on the joints; the disease suddenly receding from the extremities, and attacking an important internal organ, as the stomach, heart, brain, &c.

TREATMENT.—The *indications* in the regular gout are,

1. To alleviate pain, and shorten the duration of the paroxysms.

II. To prevent their return.

The first indication is best fulfilled by diaphoretics and opiates.

R. Ammoniacæ subcarbonatis gr. xij;
 Succus limonis recentis q. s.;
 Misturæ camphoræ f. 3x;
 Syrupi aurantii f. 5j;
 Tincturæ opii ℥ x-xxx;

Fiat haustus quarta vel sexta quaque hora sumendus.

R. Pulveris antimonialis gr. iij;
 Ammoniacæ subcarbonatis gr. iv;
 Pulveris ipecacuanhæ compositi gr. v-xv;
 Confectionis rosæ q. s.;

Misce ut fiant bolus quartis horis sumendus.

R. Extracti opii gr. ij;
 Hydrargyri submuriatis gr. j;
 Pulveris antimonialis gr. iij;
 Confectionis rosæ q. s.;

Fiat pilula hora decubitûs sumenda, superbibendo haustum salinum.

In a regular fit of the gout the assistance of medicines is not so great as is generally supposed; all that is required is to keep the inflamed part moderately warm with flannel, wool, or fleecy hosiery; to confine the patient, if young, to a spare regimen; if advanced in life, or a high liver, to enforce a more moderate one; carefully abstaining from every thing that might add to the irritation, keeping him as quiet and still as possible, and taking care that his mind be not ruffled, but, on the contrary, soothed and calmed.

Some practitioners have been induced to adopt an antiphlogistic mode of treatment, which, in a few instances, has soon removed a regular fit of the gout; in others, it has induced an alarming and serious train of symptoms.

Many topical remedies have been recommended; pediluvium of simple water; a tepid bath of water and muriatic acid, in the proportion of one ounce to a gallon of water; leeches; very cold water; ice; blisters; stinging with nettles; burning with moxa; covering the part with oilskin, and the like; but, perhaps, the less the part is interfered with the better, for the

consequence of their use is often the translation of the inflammation to an internal organ. Exciting a perspiration on the part by fleecy hosiery or flannel is sometimes attended with the most beneficial effects. [A narcotic cataplasm or anodyne fomentation affords great relief.]

Dr. Kinglake has revived the practice of applying cold water and refrigerants to the inflamed part, which in many cases has had the desired effect; but instances are not wanting in which it was supposed to have been productive of a fatal retrocession. [Scudamore and Mackintosh strongly advise camphorated spirit very much diluted with water, others use a tepid evaporating lotion.]

Lately a secret remedy, prepared in Paris, and sold in small bottles containing only two drachms, has gained great reputation in the cure of the paroxysms of gout. It is called *Eau Médicinale d'Huson*; it has been analytically examined by the French and English chemists; but its active ingredient, being a vegetable, has not been discovered. It was at different times said to be the esula, the euphorbia, the veratrum album, the colchicum autumnale, the hyosciamus, the belladonna, the digitalis, the elaterium, the gratiola officinalis. The whole contents of the bottle are intended by Huson for a dose; there are many cases where only half that quantity should be administered; but where there are no circumstances to forbid it, the full dose should be taken. It must be first mixed with rather more than an equal quantity of water. It should be taken on an empty stomach, and any part of the day may be chosen; but the most convenient time is certainly at night. The recumbent posture, and the warmth and quiet of a bed, seem to be favourable to its producing the desired effects, and to lessen the chance of its disturbing the stomach and bowels to any great degree. Its operation may be advantageously promoted by a little peppermint, pennyroyal, or ginger-tea, of which the patient may drink freely from time to time. It happens for the most part, that in four or five hours after taking the remedy, the patient begins, however severe the paroxysm may be, to experience a diminution of pain. He generally falls into a quiet sleep, and awakes in the morn-

ing nearly or quite free from suffering; and often begins already to enjoy some returning use of the affected limb. About this time he commonly feels a considerable nausea, sometimes accompanied by vomiting, and this is followed by some bilious stools. In the mean time the paroxysm goes on diminishing; and on the third, or even on the second day, little more of it remains than a swelling and stiffness of the parts, which soon go off, leaving the patient in his usual state of health. [There is good reason to think this remedy is colchicum.]

This is the common way in which it operates; but it produces other effects no less singular and deserving attention. Together with a diminution of pain, there is an abatement of fever and irritation, and of the action of the heart and arteries. The pulse is often reduced twenty strokes in a minute, in many instances considerably more, and in some, the pulse intermits. At the same time a moderate diaphoresis not unusually takes place, and the febrile symptoms soon disappear altogether. It very frequently, also, acts as a powerful diuretic, and its operation in this way lasts sometimes several days.

The paroxysm is removed in the greater number of cases in the way described; but the time in which this is effected, varies under different circumstances. Several have got rid of a smart fit the next day, so as to be able to walk about, and even go abroad. In others it has yielded more slowly; and though a single dose has, in general, been sufficient to carry off the attack, yet it does not always effect it completely. Should, therefore, any painful sensations remain, after two or three days, in the affected parts, it may be advisable again to have recourse to the remedy. In such cases, half the bottle will generally be found sufficient to remove the remaining symptoms; if not, it may be repeated in the same, or in a still smaller quantity, according to circumstances.

In its effects on the stomach and bowels, the *Eau Médicinale* is extremely capricious and uncertain: it usually operates as before described; sometimes it produces no evacua-

tion at all, at others it proves powerfully emetic and cathartic, and in some cases it acts with considerable violence. This does not seem to depend on the relative strength of the patients, but on some peculiarity of constitution. Several weak and delicate persons have repeatedly taken a full dose without experiencing any disturbance; on the other hand, some of robust habits have been violently vomited and purged by half a bottle. It is also very uncertain as to the time when these effects are produced. It usually begins to operate in eight or ten hours from its being taken; but sometimes not till after twenty-four or even forty-eight hours have elapsed; so that when there is a question about giving a second dose, it should not be repeated soon after the first. It is important, nevertheless, to know, that whatever habit of body this remedy has met with, and however it has acted on the stomach and bowels, it has equally succeeded in removing the paroxysm of gout.

Very similar in their operation are two other preparations, in general use, called Reynolds' and Wilson's; the active ingredients of which are believed to be the *colchicum autumnale* and *veratrum album*. Preparations of both are directed by physicians of the greatest experience, in the cure of gouty and rheumatic diseases.

One mode of administering these medicines is in small doses, in which way they have no sensible operation, except that of gradually reducing the force of the symptoms. With this view the bowels are to be first cleared with proper aperients, and then one of the following recipes resorted to :

R. *Liquoris ammoniæ acetatis* f. 3iij;
Misturæ camphoræ f. 3ix;
Potassæ nitratis gr. viij;
Tincturæ colchici f. 3ss;
Syrupi croci f. 3j;

Fiat haustus sexta quaque hora sumendus.

R. *Liquoris ammoniæ acetatis* f. 3iij;
Potassæ nitratis gr. viij;
Aquæ menthæ viridis f. 3ix;
Tincturæ veratri ℥ xx;
Syrupi rosæ f. 3j;

Fiat haustus sextis horis capiendus.

Others give a larger dose with some aperient, which mostly acts gently on the bowels, and much relieves the complaint: thus,

R. Tincturæ colchici f. 5j;
Misturæ camphoræ f. 5vj;
Infusi sennæ f. 5iij;
Syrupi aurantii f. 5j;

Fiat haustus nocte maneque capiendus.

[See Rheumatism for a formula now generally employed. The bowels should be opened, before we commence this medicine, and it must be used with caution when there is a determination of blood to the head. The volatile tincture of colchicum seeds is recommended in the strongest terms by Dr. Williams of Ipswich.]

The second indication is effected by regularity of life; avoiding the exciting causes of the disease; abstinence from the use of animal food and fermented liquors; milk and vegetable diet; exercise; friction with the flesh-brush; tonics and stomachic bitters and chalybeates, such as are recommended for the cure of dyspepsia; Bath waters; the regular use of mild cathartics.

R. Pulveris rhei 5ij;
Aquæ ferventis f. 5viij;

Macera, per horam integram, in vase idoneo; dein liquorem cola, et adde

Tincturæ jalapæ f. 5vj;
Magnesiæ 5j;

Fiat mistura: sumantur cochlearia tria pro re nata.

R. Pulveris rhei gr. xij;

———— cinnamomi compositi gr. iij;

Fiat pulvis, ex syrupo, mane sumendus.

R. Pilulæ galbani compositæ gr. iij;

Extracti colocynthidis compositi gr. ij;

Fiat pilula omni mane capienda.

R. Pulveris aloes cum guaiaco gr. iv;

Olei cinnamomi m j;

Fiat pilula quotidie sumenda.

The long-continued use of the mineral alkali.

R. Sodæ carbonatis exsiccatae gr. x;
 Saponis duri gr. iv;
 Pulveris rhei q. s.;

Fiant pilulæ duæ nocte maneque sumendæ.

The double acidulated soda-water in the quantity of a pint daily; lime-water; ginger.

The atonic gout is to be treated by carefully avoiding all the causes inducing debility; gentle exercise; cold bathing; the moderate use of animal food, and the least acescent wines, as Sherry and Madeira; tonics, stomachics, and chalybeates, such as are recommended against indigestion; guarding against the effects of cold, by wearing flannel next the skin; in severe attacks, blisters to the extremities are serviceable.

Of the retrocedent gout.—If the stomach be the seat of the disease, the liberal administration of warm brandy and water, or wine and aromatics; æther, ammonia, assafœtida, camphor, musk, [and sinapisms to the feet.]

R. Spiritus ætheris sulphuriei compositi f. ʒiij;
 Misturæ camphoræ fortioris f. ʒviijs;
 Syrupi aurantii f. ʒss;

Misce: sit dosis cochlearia tria omni hora.

R. Spiritus ammoniæ succinati f. ʒij;
 Misturæ camphoræ f. ʒvj;
 Syrupi rhæados f. ʒss;

Misce: sumantur cochlearia tria magna omni hora.

R. Misturæ assafœtidæ f. ʒiij;
 ——— camphoræ f. ʒiv;
 Ammoniæ carbonatis ʒj;
 Syrupi zingiberis f. ʒss;

Misce: capiat æger cochlearia tria omni hora.

R. Camphoræ,
 Pilulæ saponis cum opio,
 Moschi,
 Assafœtidæ, singulorum gr. iij;
 Syrupi zingiberis q. s.;

Fiat bolus omni bihorio adhibendus.

Warm stimulating plasters are to be applied externally.

R. Emplastri picis compositi ʒj;
 Olei essentialis sassafras ʒj;

Fiat emplastrum regioni epigastricæ imponendum.

Fomentations of bitter aromatic herbs are also proper.

[The treatment for gastritis may become necessary.]

If the head be the seat of the gouty action, vertigo, apoplexy, or paralysis, comes on; then blisters must be applied to the head and extremities, and aromatics, æther, and warm cathartics, given internally.

When the chest is affected, a similar mode of treatment is proper.

[But should congestion or inflammation commence in the head, chest, or abdomen, it must be treated on ordinary principles, while sinapisms, warm oil of turpentine, or acrid fomentations are applied over the part from which the gout receded. In the interval between the return of gout, strict attention should be paid to diet and regimen, the patient should avoid free living, take exercise in the open air, and have his bowels opened daily. By adopting this course, he may altogether prevent the recurrence of the disease. Colchicum combined with morphia or the other sedative preparations of opium will generally remove the disease in a short time when judiciously administered.]

ORDER III.

EXANTHEMATA. ERUPTIVE FEVERS.

CHARACTER.

Contagious diseases, attacking a person only once in his life, beginning with fever: at a definite time, eruptions, often numerous and small, scattered over the skin.

GENERA.

7 VARIOLA,	Small-pox. 4
[VACCINA,	Cow-pox.]
VARICELLA,	Chicken-pox.
7 RUBEOLO,	Measles. 4
7 SCARLATINA,	Scarlet fever. 4
PESTIS,	Plague.
ERYSIPELAS,	Saint Anthony's fire.
MILIARIA,	Miliary fever.
URTICARIA,	Nettle rash.
PEMPHIGUS,	Vesicular fever.
APHTHA,	Aphthous fever.

[It is impossible to account for the location of contagion. It prevails at certain seasons only, and we cannot say where it exists at other periods of the year.—See an article on the Extermination of Cholera, Fevers, and all contagious diseases, by Dr. Sanders of Edinburgh, *London Medical and Surgical Journal*, 1832, vol. ii., No. 39. The editor has taught the same doctrine in his lectures since 1828.]

VARIOLA.—SMALL-POX.

SPECIES.—The small-pox is distinguished into two species; the *distinct* and *confluent*; implying that in the former the pustules are perfectly distinct and separate from each other, and that in the latter they coalesce, and the eruption is continuous.

1. VARIOLA DISCRETA.—*Distinct small-pox*.—The eruption of distinct small-pox is ushered in by a fever of the inflam-

matory [or sthenic] type, characterized by considerable pains in the back and loins, nausea, vomiting, pain in the epigastrium upon pressure, disposition to drowsiness, [coma,] and in infants often one or more epileptic [or eclampsic] fits.

Towards the end of the *third* day from its commencement, the eruption makes its appearance on the face and hairy scalp, in the form of small red points not dissimilar to flea-bites.

During the *fourth*, it extends itself successively to the neck, breast, upper extremities, and at length occupies the whole body. [It is sometimes preceded by epistaxis.]

About the *fifth*, a little vesicle, appearing depressed in the middle, containing a colourless fluid, and surrounded by an inflamed areola or margin, perfectly circular, may be observed on the top of each little point or pustule.—The eruptive fever now disappears [or declines.]

About the *sixth*, the saliva becomes increased in quantity and viscid; at the same time that there is a degree of swelling of the throat, difficulty of deglutition, and hoarseness.

On the *eighth* day, the pustules are completely formed and spherical, or prominent and appearing almost terminated in a point; and the contained matter has assumed the appearance of pus.—The face swells; and the swelling extending to the eyelids, these often become so much enlarged as to close the eyes. [The mouth, nose, fauces are covered with pustules, there may be ptyalism in adults, and diarrhoea in children, or sanguineous alvine or urinary evacuations in either.]

About the *eleventh*, the pustules have gained their full size (which differs in different epidemics, but is generally that of a pea), the matter has changed from a white to an opaque yellow, and a dark spot appears on each.—At this time the tumefaction of the face subsides, and the hands and feet begin to swell. The secondary fever now also, usually, makes its appearance, [and may be slight or severe.]

After the *eleventh* day, the pustules from being smooth become rough, break, and discharge their contents; which drying on the surface, a small crust is formed over each of them.—These in a short time fall off, and leave the part they covered of a dark brown colour, which often remains for

many days ; and in cases where the pustules have been large, or late in becoming dry, deep indentations of the skin. The swelling of the hands and feet gradually subsides, and about the seventeenth day the secondary fever disappears. [When the disease occurs spontaneously, it is called *Natural Small-pox*.]

2. VARIOLA CONFLUENS.—*Confluent small-pox*.—Both in its symptoms and progress, the confluent kind differs materially from the distinct or benign. The eruptive fever often shows a tendency to the [asthenic, ataxic, or] typhoid form ; and besides possessing the characteristic symptoms above-mentioned, which are usually present in a more marked degree, it is frequently attended with coma or delirium ; in infants with diarrhœa ; in adults, salivation.

The eruption is irregular in its appearance, and in the succession of its stages. It is usually preceded by an erythematic efflorescence upon the face, from which the pustules emerge on the *second day* in the form of small red points ; many of which soon coalesce and form clusters greatly resembling the measles.—Maturation is more early ; but the pustules do not retain their circular form, are of an irregular shape, often flattened, and appear like thin pellicles fixed upon the skin, instead of true pus, containing a brownish ichor ; nor are they surrounded by an inflamed margin, the intermediate spaces between the clusters appearing pale and flaccid.—The swelling of the face and salivation commence earlier, and rise to a much greater height, than in the distinct form of the disease.—The fever, though it generally suffers a slight remission, does not cease upon the appearance of the eruption, and about the ninth day it suffers a remarkable exacerbation ; and in some instances all the worst symptoms of typhus supervene : the eruption assumes a dark livid or black hue, petechiæ and passive hæmorrhages [bloody urine or dysentery] make their appearance, [there is coma, convulsions, sordes on the lips and teeth], and the patient is often carried off on the night of the eleventh day from the commencement of the disease. [Should recovery happen, the pits or scars will be much deeper than in the former species. So fatal was this

disease in former times, that Sydenham proposed the axiom "*multa infantum millia letho dedit.*"

CAUSES.—Variola is the effect of a specific contagion.—It is produced either by subjecting the body to the effluvia arising from those who already labour under the disease, or by the introduction of a small quantity of the variolous matter into the system by inoculation.

PROGNOSIS.—Variola, in its regular and benign form, seldom proves fatal, unless in consequence of improper management; but it often leaves behind it a predisposition to inflammatory complaints, particularly to ophthalmia and viscerai inflammation, more especially of the thorax; and it not unfrequently excites scrofula into action, which might otherwise have lain dormant in the system.

The circumstances which lead to the apprehension of danger are,

1. The appearance of symptoms announcing the approach of the confluent form of the disease (vide Symptoms), or the disease in its progress approaching to the malignant character before described; the fever assuming the form of typhus, and the pustules becoming flattened, livid, or interspersed with petechiæ.

2. A sudden disappearance of the eruption, subsidence of the swelling of the face or extremities, suppression of saliva, or depression of the pustules, followed by great prostration of strength, universal pallor of the skin, great anxiety, oppression at the chest, syncope, convulsions, coma, or delirium.

3. Complications with visceral disease, as inflammatory affections of the brain, the lungs, or the alimentary canal, [gangrene, or suppurations in these viscera, or in the joints, blindness, and deafness.]

In general the fate of the patient is determinable from the eleventh to the seventeenth day. The crisis of the secondary fever is usually accompanied with a diarrhœa, or sediment in the urine.

[On dissection, the trachea, bronchi, lungs, liver, stomach, and intestines, are covered with pustules (Lieutaud), as also

the heart, while the brain and cerebellum are congested, and a putrescent degenerescence is found in all the large cavities of the body.]

DIAGNOSIS.—Difficult at the commencement of the disease. The pain in the stomach increased upon pressure, and the drowsiness, are the chief pathognomonic symptoms.—The regular succession of appearances, and changes in the eruption, afterwards render the distinction easy.

The distinct may be often distinguished from the confluent, before the eruption appears, by the mildness of its attack; by the synochal type of the fever; the late appearance of the eruption; and the want of typhoid symptoms.

[The disease is most dangerous to adults and gravid women, and often proves fatal.]

TREATMENT.

Of the distinct.

Indications.—I. To moderate the fever, when violent.

II. To support the strength, when deficient.

III. To obviate all those circumstances that may produce any irregularity in the appearance, or in the progress, of the disease. [The free admission of air, first proposed by Sydenham, is of great importance; and also the use of the chlorides.—See Synochus.]

In cases of violent action, in full and plethoric habits, bleeding has been had recourse to, and is recommended by many; but it is a practice mostly replete with danger, and to be avoided, if possible; for the subsequent debility generally overbalances the temporary advantage that may be gained by this remedy.

Purging is often successful in diminishing the violence of febrile action without inducing much weakness.

An emetic has been given with advantage at the accession of the disease, except in cases where there is much pain of the stomach.

During the eruptive fever, when this is pure synocha, the febrile symptoms, if considerable, are to be moderated by

exposing the body of the patient to a cool atmosphere, by frequently administering cold diluent fluids, as lemonade, imperial saline draughts, nitre; at the same time administering saline aperients, so as to keep the bowels loose.

If there be great irritability and restlessness, opium in small quantities, with a saline draught, will be serviceable, or with a small quantity of antimony.

R. Pulveris ipecacuanhæ compositi gr. ijss;

———— antimonialis gr. iij;

Confectionis rosæ caninæ q. s.;

Fiat pilula sexta quaque hora sumenda cum haustu salino communi.

R. Pulveris opii,

Hydrargyri submuriatis, āā gr. $\frac{1}{4}$;

Pulveris antimonialis gr. iij;

Fiat pulvis, octava quaque hora capiendus, ex pauxillo mellis.

Small doses of mercury are often serviceable in moderating the febrile action of variola, even when exhibited so as slightly to affect the gums; no inconvenience is likely therefore to arise from the administration of the above.

If the febrile symptoms indicate a tendency to typhus, the mode of treatment recommended for the milder form of typhus fever should be resorted to.

When the eyelids swell much, and are inflamed, a blister may be applied behind the ears, or a leech to the temples. [In such cases, and when the face is swollen, olive oil or cream is often applied.]

If the throat be much affected, and there is difficulty in swallowing, a blister is to be applied to the neck, and gargles of infusion of roses directed.

As debility comes on, recourse must be had to quinine, wine, and nourishment not so antiphlogistic as in the commencement.

Determination to the head or chest, or other viscera, requires blisters, pediluvium, sinapisms to the feet [and ordinary remedies].

Obstinate vomiting, which in this disease often proves both a troublesome and dangerous symptom, is most effectually

allayed by saline remedies, in the act of effervescence, with opium.

R. Potassæ carbonatis ʒj;
Misturæ camphoræ f. 3x;
Tincturæ opii ℥ iv;
Syrupi aurantii f. 3j;

Fiat haustus, quartâ quaque horâ sumendus in actu effervescentiæ cum cochleare uno magno succi limonis recentis.

R. Camphoræ gr. vj;
Opii pulverisati gr. ss;
Saponis duri gr. iv;

Fiant pilulæ duæ sexta quaque hora sumendæ.

In all cases where there is a great propensity to sweating, after the eruptive fever has passed by, a cool regimen will be particularly necessary.

Diarrhœa is to be checked when it is excessive and increases debility, by small doses of opium [with chalk mixture].

When the eruption suddenly recedes, or the pocks sink and become very much dimpled, and any alarming symptoms supervene, as rigors, convulsions or delirium, recourse must be had to blisters and sinapisms [leeching the scalp, cold dash on the head while the body is in a warm bath; and the vapour bath has been found of great value: we must guard the head, chest, and abdomen against inflammation. It has been proposed to effect this by cauterizing the pustules; but this practice has proved injurious in some cases, and requires more observation to justify its employment. Sometimes suppuration of the knee, ankle, wrist, and elbow joints supervene on recovery from this condition.]

Upon the accession of the secondary fever, if this preserve the character of synocha, and be not attended by any debility, recourse must be had to the same means of moderating it employed at the commencement of the disease.

If, on the contrary, the secondary fever be typhoid, the means recommended for the cure of typhus gravior must be enforced.

[This disease seldom attacks persons more than once, but it has recurred occasionally in the same individual. Purgation

is necessary after convalescence, and strict attention to symptoms when any prevail.

The sequelæ of small-pox often prove fatal. Among these are inflamed pustules, abscesses, boils, suppuration of the joints, in the hip, knee, &c.; blindness from opacity of the cornea; development of tubercles in the lungs, laying the foundation of phthisis, mesenteric disease, scrofula, in the different parts of the body. Hence the prevention of all these diseases, by the discovery of vaccination, is justly considered, throughout the world, as one of the greatest improvements in medicine. The heads of the profession in all countries recommend vaccination; and if practitioners will only explain the effects of the above diseases to parents, few will require inoculation for small-pox. There is less danger, however, induced by inoculation than by the spontaneous or natural small-pox, as the patient may be prepared for it by proper medicine. When parents insist on the variolous inoculation, we should mix the virus with vaccine matter, as the result will be, that vaccination will be produced and go through its course, and a modified small-pox with very few pustules will succeed it.]

[VACCINA, VACCIOLA.—COW-POX, KINE-POX, VACCINE DISEASE.

The benefits conferred on mankind by the discovery of vaccination, as a preventive of small-pox, are now universally admitted. If the virus is genuine and properly inserted by inoculation, the human body is most probably rendered free from the attack of small-pox. There are a few exceptions, but in general the fact is as stated. The vaccine lymph should be inserted under the cuticle, by three or four punctures, made near each other, in each arm. If the inoculation is properly performed, we observe on the second day small red spots which feel hard, but when viewed through a microscope are seen to be vesicular. On the third or fourth day the spots are larger and more perceptible, and on the fifth

small pearly vesicles appear. These are surrounded by a crimson or pink areola, but sometimes not before the seventh or eighth day, when they become circular or annular, and the efflorescence an inch in diameter. The surface of the vesicle is uneven, there is a depression in the centre. On the ninth day the edges are elevated, and the rosy blush is increased, hard and tumid. At this period an erythema may extend over the arm, and sometimes over the whole body. About the ninth or tenth day the disease is at its height, and there is a slight degree of fever for a few hours. On the eleventh or twelfth day the areola, or rosy blush, diminishes; the centre of the vesicle is covered with a brown scab, which falls off in a few days, generally on the twentieth, leaving a deep mark, or indentation, on the skin, of a circular form, about an inch in diameter, with as many pits as there were cells in the vesicle. Unless all these symptoms are observed, a spurious cow-pox has been communicated, and re-inoculation is absolutely necessary. The best time for taking the matter is on the eighth day, and from that to the twelfth, but after this time it cannot be depended on; or if any cause, such as friction or injury, has disturbed the progress of the vesicle. The disease will not be properly communicated should there be a chronic eruption on the arms; if scarlatina, measles, or other cutaneous diseases supervene; or if dentition, disordered bowels, or any other malady is present at the time of inoculation. It is said by a few, that vaccination, however genuine, does not render the body insusceptible of small-pox; but this is contrary to the general opinion. Should the latter disease occur at any future period of life, it is extremely mild, and very seldom proves fatal, though it may leave pits or scars. How few cases do we now observe of deformity of the face from small-pox, a fact that proves the great value of vaccination. When small-pox occurs after vaccination, it is milder, yet as contagious as if no vaccine inoculation had taken place. Infants should be vaccinated after the sixth week. The early preparatory step to be taken is to open the bowels. There should be no cutaneous eruption on the arms, and no disease present at the time of vaccine inoculation. The best vacci-

nators prefer three or four slight punctures in each arm, and sometimes a single puncture in each, while others make as many as thirty, and others prefer longitudinal scratches with a lancet. When many punctures are made, the arm becomes much inflamed, and sometimes ulcerates, and gives rise to great constitutional irritation. Such a practice is cruel and unnecessary. Sometimes boils, pustules, leprous and impetiginous eruptions succeed the vaccine disease; but this seldom happens when the child's health is good at the time of vaccination.]

VARICELLA.—THE CHICKEN-POX, SWINE-POX, BASTARD-POX, GLASS-POX.

SYMPTOMS.—After slight symptoms of fever, as lassitude, loss of sleep, wandering pains, loss of appetite, &c. an eruption appears; first on the back, consisting of small reddish pimples, much resembling the first appearance of the small-pox. On the *second* day the red pimples have become small vesicles, containing a colourless fluid; and sometimes a yellowish transparent liquor. On the *third*, the pustules arrive at their full maturity, and, in some instances, very much resemble the genuine small-pox. Soon after, the fluid becomes extravasated by spontaneous, or accidental, rupture of the tender vesicle, and a thin scab is formed at the top of the pock, without pus ever being formed, as in the true variola. Generally before the *fifth* day the whole eruption disappears, and [in general] no cicatrix or mark is left behind [though rarely the pits are as deep as those of small-pox].

DIAGNOSIS.—*From variola*.—By the small degree of fever; by the pimples first appearing in the back; by no suppuration taking place; by the pustules falling off, in scales, about the fifth day; at which period the eruption in variola is only just completed.

PROGNOSIS.—It is entirely free from danger, unless the eruption be of the confluent kind, when it is to be appreciated from the degree of violence of the concomitant fever.

TREATMENT.—This complaint is of so trivial a nature, as seldom to require the aid of medicine. Gentle cathartics are all that are in general necessary. Should there be accidentally much fever, the means may be employed for moderating it that are recommended in small-pox.

MORBILLI VEL RUBEOLA.—THE MEASLES.

SPECIES.—1. *Rubeola vulgaris*, with small, confluent, clustering pimples, hardly elevated.

2. *Rubeola variolodes*, with distinct and elevated pimples.

A much better distinction, however, is into inflammatory and putrid.

SYMPTOMS.—1. *The benign or inflammatory*.—Synocha; cough; hoarseness; difficulty of breathing; sneezing; sense of weight in the head; nausea or vomiting; dulness of the eyes; drowsiness; epiphora; coryza; itching of the face.

On the *fourth* day, small red points or papulæ appear, first on the face, and afterwards successively on the lower parts of the body. They are generally in clusters, do not rise into visible pimples, but by the touch are found to be a little prominent.

On the *fifth* or *sixth* day, the vivid red is changed to a brownish hue; and in a day or two more the eruption entirely disappears, with a mealy [or furfuraceous] desquamation of the cuticle.

The febrile symptoms are not diminished upon the appearance of the eruption, but rather increase, and become attended with much anxiety and oppression of the præcordia, and symptoms of pneumonia. At the period of desquamation of the papulæ, a diarrhœa frequently comes on, and continues for some time. [The eruption may occur without catarrh (*rubeola sine catarrho*).]

2. *The malignant or putrid*.—This form of the disease is accompanied with typhus fever, and the symptoms of putrescency, that are enumerated under the head of Typhus. The eruption appears more early, assumes a dark or livid hue, [*rubeola nigra*,] and all the symptoms above described are in an aggra-

vated form. The fauces often assume the same appearance as in cynanche maligna, probably from a combination of the two diseases. And in some instances all the worst symptoms of malignancy supervene.

[This disease attacks in general but once, though it has recurred to the same individual after years.]

CAUSE.—Specific contagion.

DIAGNOSIS.—The pathognomonic symptoms, which distinguish the eruptive fever of measles from variola and other diseases, are the dry cough and hoarseness; the heaviness of the head and drowsiness; sneezing; coryza; the appearance of the eyes, which are red, swelled, itchy, very sensible to light, and frequently loaded with tears. [It is distinguished from scarlatina, by its more crimson hue, and by the defined character of the patches; from roseola, by the darker hue and more sudden appearance of the eruption, and greater severity of the symptoms.]

PROGNOSIS.—*Favourable*.—The febrile and other symptoms light; moderate diarrhœa; early, and free, expectoration; a moisture on the skin at the appearance of the eruption.

Unfavourable.—A high degree of fever; hot and parched skin; hurried and difficult breathing; flushed countenance; unusually hard pulse.

The fever increasing after the appearance of the eruption; and assuming the form of typhus; great pain in the head and eyes; shooting pains in the chest; symptoms of pneumonitis or cynanche; no expectoration before the fourth day; the pulse rapid and small; delirium; extremely anxious respiration.

The sudden disappearance of the eruption, succeeded by delirium; great anxiety, laborious respiration; acute pains in the chest, or violent diarrhœa; the eruption becoming of a livid hue; a pallid appearance of the pimples, with great prostration of strength, small intermitting pulse, petechiæ, and other marks of putrescency.

Continued diarrhœa or vomiting.

TREATMENT.

Of the inflammatory species.

[Sydenham was the first who described the proper treatment of this disease.]

Indications.—I. To diminish the inflammatory action.

II. To relieve urgent symptoms.

The first indication is to be attempted:—

1. By abstinence from animal food, and strict adherence to the antiphlogistic diet.

2. By placing the patient in a moderately cool atmosphere, the temperature of which should be regulated in a great measure by his own feelings, carefully guarding against any sudden change [or exposure to severe cold.]

3. By the common diaphoretics and refrigerants; more especially the saline ones.

4. By the occasional exhibition of saline aperients.

5. When the synocha-febrile symptoms run high, and more especially when symptoms of local inflammation are present, recourse must be had to general and local bleeding.

Practitioners differ much with respect to the time at which blood-letting may be employed with the most advantage. Dr. Morton thinks it requisite as soon as the eruption is completed. Sydenham recommends it after the eruption has disappeared; but the practice in this respect should be regulated by the degree of the accompanying pneumonic symptoms, without attending to the particular period of the disorder, or the state of the eruption: this is the generally approved practice in the present day.

Where the inflammatory symptoms become urgent, with much anxiety, pain, and oppression at the chest, general bleeding cannot be dispensed with, unless there be a septic tendency in the system. Topical bleeding, under less urgent symptoms, may suffice.

6. By the application of blisters to the chest, in cases where the fever is violent, with delirium or pneumonic inflammation. [In bad cases ulceration or sloughing succeeds vesication.]

The second indication regards symptoms.

1. If the disease be accompanied by inflammation of the lungs, general and topical blood-letting must be enforced; with occasional purges and nauseating diaphoretics, as recommended for the cure of pneumonia, [provided there be no gastro-intestinal irritation, inflammation, or ulceration, which is often present in infants and children.]

2. Hoarseness, cough, and inflammation of the fauces, will be palliated by barley-water, with acacia gum; thin arrow-root; orgeat and water; the compound decoction of barley or capillaire and water, taken in very small quantities and frequently, not cold, but with the chill just removed. The addition of a little nitre, or of a small quantity of lemon-juice, will render them more palatable.

Inhaling the steam of warm water is also serviceable.

Mild opiates are occasionally useful against these symptoms, after the febrile action is abated; but when given before, they neither procure rest, nor an abatement of the cough.

R. Misturæ amygdalæ f. ʒv;
Potassæ nitratis gr. xv;
Syrupi papaveris f. ʒss;

Misce: ejus sumat æger cochleare medium urgenti tusse.

An opiate, given at bed-time, should always be combined with a saline diaphoretic.

3. When diarrhœa does not take place towards the resolution of the disease, a purge or two of the submuriate of mercury should be administered.

4. Where the diarrhœa is excessive, astringents and opium are necessary.

R. Misturæ cretæ f. ʒvj;
Syrupi papaveris f. ʒvj;
Fiat mistura, cujus capiat æger cochlearia duo magna post singulas sedes liquidas.

R. Confectionis aromaticæ ʒj;
Misturæ cretæ f. ʒxij;
Pulveris ipecacuanhæ gr. j;
Fiat haustus quartis horis sumendus.

[For other astringent mixtures, see p. 81.]

R. Confectionis aromaticæ ʒj;
 Extraeti hamatoxyli gr. x;
 Misturæ eretæ f. ʒxij;
 [Syrupi simplicis ʒi;]

Fiat haustus quartis horis capiendus.

R. Extraeti catechu contusi ʒjss;
 Aquæ ferventis f. ʒxij;
 Macera, et liquorem frigefactum cola:

R. Hujus colaturæ f. ʒxij;
 Pulveris tragacanthæ compositi gr. x;
 Confectionis aromaticæ ʒj;
 Syrupi papaveris f. ʒj;
 Fiat haustus quartis horis sumendus.

To either of the above five drops of laudanum may be added.

Should the diarrhœa continue, and threaten great exhaustion, recourse must be had to the opiate confection, astringent clysters, and the more powerful astringent remedies recommended against diarrhœa.

5. If the symptoms manifest a tendency to a putrid or malignant form of disease, they must be treated accordingly, as directed in typhus.

Of the putrid or malignant species.

The treatment of malignant measles is similar to that of typhus fever: it requires the exhibition of mineral acids, cinchona, and red port wine. Delirium, pneumonic symptoms, cough, &c. must be treated as before recommended, except by bleeding, which is always contra-indicated when a septic state of the fluids or great debility is present.

When the eruption of measles disappears before the proper period, and convulsions, or great anxiety or delirium, take place, the indications will be to restore the eruption to the skin. To effect this, recourse must immediately be had to the warm bath, blisters [or sinapisms] to the chest and feet, the administration of warm dilute wine, camphor and æther, or antimony.

R. Pulveris antimonialis gr. vj;
 Fiat pulvis tertiâ vel quartâ vel sextâ quaque horâ adhibendus.

R. Spiritûs ætheris nitriei f. 3ij;
Liquoris ammoniæ acetatis f. 5vj;
Aquæ menthæ viridis f. 3v;
Syrupi eroei f. 3iij;

Misce: cujus capiat æger cochlearia duo magna frequenter.

R. Liquoris ammoniæ acetatis f. 3jss;
Spiritûs ætheris sulphuriei compositi f. 3ij;
Misturæ camphoræ fortioris f. 3v;
Vini antimonii tartarizati f. 3ss;

Fiat mistura, ejus adhibcantur cochlearia duo magna in horâ, vel secundâ vel tertiâ quaque horâ.

[When convalescence commences, the diet should be nutritious, the bowels regulated, the dress warm to prevent pulmonie inflammation, which often occurs, excites tubercles, and lays the foundation of consumption.]

SCARLATINA.—SCARLET FEVER.

SPECIES.—1. *Scarlatina simplex*, not accompanied with sore throat.

2. *Scarlatina cynanchica*, with ulcerous sore throat.

SYMPTOMS.—*Scarlatina simplex*.—Synoecha or synoehus. About the *fourth* day, the face begins to swell, and a rash, of a vivid red colour like that of the boiled lobster-shell, appears scattered throughout the skin, which at length coalesces, and after three days disappears, leaving a desquamation of the cuticle, which falls off in branny scales, and is occasionally succeeded by anasarea. [The tongue, fauces, eyelids, nostrils, and cheeks, are of a deep red colour.]

Scarlatina cynanchica [vel *anginosa*.]—Lassitude; dejection of mind; pain in the head, followed by soreness, with sense of straitness in the muscles of the neck and shoulders; rigor; horror; and other symptoms of typhus pyrexia.

On the *second* day, difficulty of swallowing; hoarseness; loss of appetite; nausea, and often vomiting; hurried respiration, interrupted by frequent sighs; the breath is hot and burning to the lips; great thirst; hot and dry skin; small

pungent pains, as if occasioned by the point of a needle; quick, weak, sometimes hard pulse; [croupal respiration, which may cause suffocation.]

On the *third* day, the face, neck, and breast, appear redder than usual; or scarlet stains, or patches, are observed about the mouth and nose; the submaxillary glands are enlarged and painful to the touch; the velum pendulum palati, the uvula, the tonsils, and pharynx, as far as the eye can reach, partake of the general redness. Collections of thick mucus, and specks, are often observed, much resembling the sloughs in cynanche maligna; yet real ulceration seldom takes place. [The papillæ of the tongue are elongated, the organ itself is very red, the inflammation may extend along the mucous membrane of the fauces, nostrils, and eustachian tube, and be followed by purulent discharge from the nostrils and ears.] The redness in a few hours becomes universal over the body, and increases to a great degree of intensity. It disappears upon pressure; is perfectly smooth to the touch; nor is there the least appearance of pimples or pustules.

On the *fifth* or *sixth* day, the intense scarlet gradually abates; a brown colour succeeds; when the skin, becoming rough, peels off in small scales; and the patient begins to recover strength and appetite. Not unfrequently, however, after a few days amendment, an unaccountable languor and debility is felt; stiffness in the limbs; accelerated pulse; disturbed sleep; disrelish for food; scarcity of urine; dropsical swellings; sometimes anasarca alone; sometimes combined with ascites, or hydro-thorax.

CAUSE.—Specific contagion.

DIAGNOSIS.—*From measles*.—By the absence of cough, epiphora, sneezing, and coryza; by the appearance of the eruption; its greater extent; its not being elevated into pimples; by the affection of the throat.

From erysipelas.—See Erysipelas.

From cynanche maligna.—By the disease being more inflammatory—the other accompanied with distinct typhus fever; by the absence of sloughs in the one—by their presence in the other. The following are the chief of the more

minute distinctions:—Scarlatina prevails in the summer and autumn, and attacks the vigorous and robust; cynanche maligna in the spring and winter, and more frequently attacks the weakly and delicate. The skin in scarlatina is of a bright scarlet, smooth, and always dry and hot; in cynanche it is red, pimply—the pimples being redder than the interstices, and bedewed with water. Scarlatina terminates upon the third, fifth, eighth, or eleventh day; the termination of cynanche maligna is irregular.

Scarlatina eynanchica, and cynanche maligna, are, however, considered by most people in the present day, as the same disease, the latter being only a more malignant form of scarlatina.

From variola.—The eruptive fever of variola is distinguished from the above by the pain of the stomach, upon pressure, and other symptoms elsewhere enumerated.

• *PROGNOSIS.*—*Favourable.*—The concomitant fever purely inflammatory; remission of the febrile symptoms, and of the affection of the throat, upon the appearance of the eruption; the eruption appearing late; hæmorrhage from the nose of a florid red colour.

Unfavourable.—The eruption being preceded by great anxiety, nausea, vomiting; the fauces of a dark red or purple colour, without swelling; ash-coloured or brown specks, soon becoming ulcerated; great prostration of strength; delirium; coma; the eruption appearing as early as the second day; its coming out in patches is more unfavourable than an universal efflorescence; [or not appearing at the usual time or for several days afterwards, when cerebral congestion may suddenly come on and prove fatal. In bad cases, the lips and genitals may mortify or become gangrenous. On dissection, the fauces, larynx, and trachea are found inflamed, ulcerated, or gangrenous. When these symptoms appear, the disease is called scarlatina maligna]; the fever continuing after the period of desquamation; glandular swellings; anxious difficulty of breathing, and peculiarly stridulous voice, indicating the extension of the disease to the larynx and trachea; acute pain in the ear with deafness; the saliva tinged with blood of a dark colour;

discharge of acrid matter from the nose; running from the ears; skin continuing obstinately dry; the desquamation followed by a fresh efflorescence and increase of fever; diarrhœa. [The parotid, sub-maxillary, salivary, and cervical glands may inflame and suppurate, or congestion or inflammation of the brain or lungs may be induced.]

TREATMENT.—All that will in general be requisite in the treatment of scarlatina simplex, when it does not show any malignancy, is to keep the patient in a moderate and equable temperature, about 60° of Fahr. is mostly agreeable and beneficial: to preserve the apartments clean and open; to enforce a light diet without animal food; to direct cooling acidulated liquors for common drink, and to administer gentle aperients, more particularly towards the decline of the eruption.

Scarlatina cynanchica.—The cure of this, in addition to the regimen above prescribed, is to be conducted by,

1. The early exhibition of an *emetic*.

R. Antimonii tartarizati gr. j;
Pulveris ipecacuanhæ gr. xij;
Aquæ cinnamomi f.3x;
Syrupi f 3j;
Vini ipecacuanhæ f.3ss;

Fiat haustus emeticus.

[The quantity of the above ingredients must vary according to the age and constitution of the patient.]

2. Or a purge of the submuriate of mercury.

R. Hydrargyri submuriatis gr. iij;
Pulveris rhei ʒj;

Fiat pulvis aperiens ex melle sumendus.

The bowels are to be stimulated occasionally by aperients; and two or three grains of the submuriate of mercury, with as much antimonial powder, have been usually more serviceable than other aperients. [Leeches, sinapisms, warm turpentine or blisters should also be applied to the throat, and venesection in bad cases. Some object to venesection, as typhus may supervene; but unless we subdue violent inflammation in the first instance, there may be impeded respiration, congestion of the

brain, convulsions, the most malignant typhoid symptoms, and death.—Sec Cynanche Maligna.]

3. *Cold affusion*, or frequently sponging the body with vinegar and water, is strongly recommended by some, when the heat of the body is much, and steadily, above the natural degrec. And when due attention is paid to the proper way of employing this remedy, its beneficial effects are experienced; [but it may cause repression of the eruption.]

Dilute æther, acetic acid, alcohol, eau de Cologne, are also equally good.

R. Spiritus ætheris sulphurici f. ℥j;
Acidi acetici f. ℥ij;
Aquæ f. ℥xiiij;

Misce.

R. Acidi acetici f. ℥jss;
Spiritus tenuioris f. ℥ij;
Aquæ f. ℥xiiij;

Misce.

4. The regular administration of dilute *acids*, with light preparations of the *tonic* and *antiseptic* barks and roots.—See Synochus.

R. Aquæ destillatæ f. ℥jss;
Acidi muriatici,
—— nitrici, singulorum ℥ ij;
Pulveris tragacanthæ compositi ℥ss;
Syrupi aurantii f. ℥j;

Fiat haustus, quartâ vel sextâ quaque horâ sumendus.

R. Infusi rosæ f. ℥vij;
Acidi sulphurici diluti f. ℥j;
Syrupi rosæ f. ℥ss;

Misce: ejus capiat æger cochlearia tria magna quartâ quaque horâ.

5. The frequent use of acidulated gargles. [The chlorides of lime or soda are the best, see p. 88.]

R. Aquæ hordei f. ℥vij;
Acidi muriatici,
—— nitrici, aa ℥ x;
Mellis rosæ f. ℥j;

Fiat gargarisma.

R. Infusi lini f. ℥viij ;
 Acidi sulphurici diluti f. ℥v ;
 Mellis rosæ f. ℥j ;

Fiat gargarisma.

R. Infusi rosæ f. ℥viij ;
 Potassæ nitratis ℥j ;

Fiat gargarisma.

6. Where delirium, coma, or difficult deglutition [or respiration] supervene, *blisters* between the shoulders and to the external fauces. [Anasarca, or desquamation of the cuticle all over the body, may supervene, and the latter is detached from the hands and feet in one entire piece, representing the finger of a glove in the first case, and a sock in the other.]

7. At the decline of the eruption tonics are required, especially [quinine] cinchona, or cascarilla; a nutritious diet also, with wine.

Every case of scarlatina, in which there is typhus pyrexia, or a malignancy present, at whatever period it may happen [is a highly dangerous disease, and], requires the employment of cordial tonics, acids, and wine, in large and repeated doses, as recommended for the cure of typhus gravior and cynanche maligna. When the throat is covered with sloughs, stimulating and astringent gargles must be used very often. Such as are prescribed for cynanche maligna.

R. Hydrargyri oxymuriatis gr. iv;
 Mellis rosæ f. ℥j ;
 Aquæ destillatæ f. ℥iij ;

Misce, ejus applicetur pauxillum, ope penicilli, tonsillis ulceratis.

R. Tincturæ myrrhæ f. ℥j ;
 Mellis rosæ f. ℥ss ;
 Infusi rosæ f. ℥vjss ;

Fiat gargarisma.

R. Decocti cinchonæ f. ℥viij ;
 Aluminis purificati ℥ss ;
 Acidi sulphurici diluti f. ℥j ;

Fiat gargarisma.

The Cayenne pepper gargle, directed page 142.

The application of blisters is indicated in most cases where

there is external tumefaction; petechiæ, or vibices, or coldness in the extremities, alone contra-indicate their use. When applied under a great tendency to putrefaction, or great debility, they sometimes become gangrenous.

Bleeding, formerly much employed, is now altogether abandoned, and considered as likely to produce the most destructive consequences; so purging violently is found prejudicial from its debilitating effects. [This is correct as to the malignant, but not as to the cynanchicæ species.]

The doses above directed are for adults; for children the reduced doses must be prescribed.

Children sometimes are with difficulty prevailed upon to gargle and take the medicines; when they refuse, the gargle must be used by means of a syringe, and syrup of bark may be given largely, [or by means of some sponge or lint tied on a piece of wood or whalebone, and passed into the fauces.

When anasæra, ophthalmia, pneumonia, cerebral affections, or other diseases succeed scarlatina, they are to be treated on ordinary principles. Purgation, tonics, nutritious diet, warm clothing, and cautious avoidance of exposure to cold or damp must be employed and observed after recovery from this disease.]

ERYSIPELAS.—ST. ANTHONY'S FIRE.

SPECIES.—I. *Erysipelas vesiculosum*, attended by large vesications.

II. *Erysipelas phlyctænodes*: the shingles; inflammation; producing crops of small vesicles not larger than a lentil.

III. *Erysipelas infantum*: appearing on infants.

SYMPTOMS.—Rigors, and other symptoms of pyrexia; great confusion of the head, sometimes amounting even to delirium; coma; nausea; vomiting; quick hard pulse; strong, or small, as the fever may incline to the inflammatory or typhus kind. About the *second* or *third* day, the skin of a particular part of the body becomes inflamed; soon after an efflorescence appears of a florid red colour; at first of no great size, but

gradually spreading, at length occupies a large extent of surface.—Considerable tumor, and a peculiarly acrid heat of the inflamed parts; when the face is the seat of the disease, the whole hairy scalp becomes affected [sometimes the brain and its membranes are inflamed], and the eyes are frequently closed by the tumor of the palpebræ; as the redness extends, it frequently leaves, or is abated in, the parts at first occupied. After a longer or shorter time the efflorescence terminates in phlyctænæ, which are small watery vesicles the size of lentils; or in vesicles, or in a desquamation of the cuticle; the fever, however, does not always, at this period, suffer a remission; but is frequently aggravated by increase of coma, or delirium, and the patient expires about the ninth or eleventh day.

[Recovery has happened when these symptoms were present, and by the use of ardent spirits.—See Sir A. Cooper's Lectures. The disease may extend to the cellular tissue or attack the head; it requires active treatment, as in phrenitis.]

CAUSES.—*Predisposing*.—Choleric-sanguine temperament; plethoric habit; previous affections of the same nature.

Exciting.—Cold; excessive heats, or vicissitudes of temperature; abuse of fermented liquors; suppressed evacuations, or other causes inducing plethora; the presence of irritating matter in the primæ viæ; more especially of acrid bile.—Contagion? [rather infection, see p. 196.]

PROGNOSIS.—*Favourable*.—The fever purely inflammatory; the eruption of a bright scarlet or red colour; not extending over a large surface; no vesications; the fever and coma diminishing upon the appearance of the efflorescence; and this, soon after, assuming a yellowish hue, with an abatement of the swelling.

Unfavourable.—The fever assuming the typhoid form; its being protracted to the seventh, ninth, or eleventh day, with increase of coma, and delirium; the inflammation becoming of a dark rose colour; its suddenly receding from the surface, and attacking an internal part; its extending over a large surface, without leaving the part it originally occupied; livid vesications; weak, rapid, irregular pulse; great prostration

of strength; early coming on of coma; the disease being epidemic; the constitution of the patient originally weak, or emaciated by previous illness; the disease being combined with dropsy, jaundice, or other affections, originating in a depraved organ.

TREATMENT.—*Indications*.—I. To reduce the phlogistic diathesis, if the fever be of the inflammatory kind, [and the head, chest, or abdomen affected by metastasis.]

II. To support the strength of the patient, if it assume the typhoid form. And,

III. To obviate the tendency to a determination to the head or other important organs.

The phlogistic diathesis, if present, is to be reduced,

1. By *bleeding*.—This operation is, however, to be adopted with the greatest care, for it seldom happens, that the fever is purely inflammatory, but mostly mixed, having strong synoehal symptoms in the beginning, and running soon into typhoid.

Local blood-letting is never serviceable, for gangrene mostly takes place where the skin is penetrated. [This is not correct, as leeches are daily applied in our hospitals with benefit.]

When the subject is young, in the country, and the constitution has not been impaired, and the symptomatic fever high, the lancet may be resorted to with advantage; and, on the other hand, a young subject, accustomed to the air and living of a large town, and more especially if the constitution has an obvious cachexia, the abstraction of blood would favour the speedy change from an apparently inflammatory into a typhoid state of the febrile symptoms. [When the disease attacks by metastasis the organs in any of the three splanchnic cavities, depletion is necessary.]

2. By cooling or mercurial *purges*.—These are extremely serviceable: the submuriate of mercury is to be administered in doses of from three to five grains, with rhubarb or any aperient, [especially when there is biliary derangement.]

3. By nauseating *diaphoretics*: especially tartarized antimony, acetate of ammonia, and camphor.

R. Misturæ camphoræ f. ʒjss;
 Liquoris ammoniæ acetatis f. ʒiij;
 ——— antimonii tartarizati ℥ xv;
 Syrupi croci f. ʒj;

Fiat haustus quarta quaque hora adhibendus.

When the synochal symptoms are degenerating into typhoid, large doses of camphor are highly beneficial.

R. Misturæ camphoræ fortioris f. ʒx;
 Liquoris ammoniæ acetatis f. ʒiij;
 ——— antimonii tartarizati ℥ xv;
 Syrupi aurantii f. ʒj;

Fiat haustus quartis horis sumendus.

4. By *diluents*: as acidulated soda-water, lemonade, tamarinds with water, and the like.

To support the strength of the patient, when erysipelas assumes the typhoid character, recourse must be had to wine, Peruvian bark, opium, and mineral acids.

These remedies are to be exhibited in the same way as recommended in the cure of typhus.

The treatment of erysipelas will vary, therefore, according to the type of the fever with which it is attended. If it be well-marked synocha, which it seldom is, the usual means of diminishing inflammation are to be resorted to; and, above all others, the frequent exhibition of mercurial purges. If, on the contrary, it possess the character of typhus, and manifest symptoms of malignancy [quinine], Peruvian bark, wine, mineral acids, and other remedies of the invigorating kind, enumerated under typhus, are to be relied on.

In cases of coma and delirium, much relief will be afforded by the semicupium, together with the application of sinapisms to the feet, [mustard pediluvia,] or a blister between the shoulders.

The topical applications resorted to by surgeons are various.

1. Dry absorbent powders, to take up any acrimonious fluid that may be oozing out, as starch, meal, chalk, litharge.

2. Warm spirituous fomentations.

3. Cold spirituous applications to young habits, where the inflammatory action is strong.

R. Liquoris ammoniæ acetatis,
 Acidi acetici,
 Spiritûs tenuioris, ʒiij ;
 Aquæ puræ f. ʒix ;

Misce pro lotionē.

R. Misturæ camphoræ f. ʒvj ;
 Liquoris ammoniæ acetatis f. ʒij ;

Misce pro lotionē.

[In phlegmonous erysipelas, the part is either punctured or freely incised with advantage. When the brain is congested or inflamed, we employ incisions, &c., as in phrenitis. When erysipelas is gangrenous, we use tonics, antiseptics, chlorides of lime and soda, both internally, quinine, fermenting poultices, and the ordinary treatment of this last disease. Should suppuration occur, the abscess must be timely opened ; and erysipelas will be prevented from extending by applying nitrate of silver around it.]

MILIARIA.—MILIARY FEVER.

SYMPTOMS.—Synoehus ; oppression, and sense of tightness about the præcordia ; the breathing becomes laborious, and is interrupted with frequent sighs, or teasing cough, while the spirits are oppressed with unusual sadness and timidity.—As the heat increases, there is a sense of pricking or itching in the skin, which Vogel says is also sometimes felt in the bowels ; numbness in different parts of the body ; *profuse sweat*, of a sour, rank odour, during which there is often a contracted pulse.—On an *uncertain day*, a number of small red papulæ, about the size of millet-seeds, are observed first upon the neck and breast, and thence gradually extending to the trunk and extremities ; their prominence is imperceptible to the sight, yet evident to the touch ; they often lose their redness, and appear of the ordinary colour of the skin.—

After *ten or twelve hours*, a small vesicle appears upon the top of each ; this at first is of a whey colour, but afterwards becomes white.—At other times, the pustules retain their red colour, which has given rise to the division into the white and red eruptions ; they generally appear separately ; some-

times, however, they are intermixed; in both, the matter, contained in the vesicles, has a peculiarly offensive smell.—In *two or three days* the vesicles break, and are succeeded by small crusts, which fall off in scales.

CAUSES.—*Predisposing*.—Lax habit of body; sanguine temperament; childhood; the female sex; the period of childbirth; old age; preceding affections of the same disease; debility, however induced; excessive evacuations; long-continued and copious menstruation; fluor albus; the presence of irritating matter in the *primæ viæ*; abuse of tea-drinking.

Exciting.—Immoderate sweating, produced by excessive heat, or by heating medicines.

DIAGNOSIS.—The uncommon anxiety and dejection of mind; the profuse sweating; its peculiarly fœtid, rank smell. Afterwards, the appearance of the eruption.

PROGNOSIS.—*Favourable*.—The fever inclining more to the nature of synœcha than typhus; remission of the symptoms upon the appearance of the eruption; the papulæ of a florid red colour.

Unfavourable.—The sweating obstinately continuing after the eruption of the papulæ, with increase of fever; great anxiety; flaccidity of the parts covered by the eruption; profound coma; difficulty of breathing; dejection of mind; the sudden disappearance of the eruption, followed by great prostration of strength, anxiety, difficult respiration, violent vomiting, delirium, convulsions; the appearance of petechiæ, interspersed among the papulæ; the symptoms of putrescency elsewhere enumerated; rapid, weak, and intermitting pulse; anasarca swellings.

TREATMENT.—*Indications*.—I. To diminish the immoderate heat and sweating.

II. To support the strength of the patient, where there are concomitant symptoms of great debility.

The first indication will be accomplished,

1. By the cautious application of *cold*;—the air of the bedroom should be cooled, and part of the bed-clothes removed; the patient desired to lie with his arms exposed.

2. By gentle *cathartics*, if the debility be not great; neu-

tral salts are to be preferred. When these are inadmissible, the union of rhubarb with submuriate of mercury.

3. By mineral *acids*; especially the sulphuric, which may be given in the infusion of roses, or with decoction of bark [or quinine].

The second indication requires,

Bark and wine; opium; blisters; and the other means proper for typhus fever.

Should a retrocession of the eruption take place, followed by the alarming symptoms above mentioned, musk, camphor, opium, blisters, and frictions to the skin; endeavouring, by every means, to bring out and support a copious diaphoresis; external warmth; powerful diaphoretics, &c. [Washing the skin with a solution of chloride of lime is the best means of checking this disease.]

URTICARIA.—NETTLE-RASH.

CHARACTER.—An eruption resembling that produced by the stinging of nettles, whence its name. These little elevations often appear instantaneously, especially if the skin be rubbed or scratched, and seldom stay many hours, sometimes not many minutes in the same place; but vanish, and again make their appearance in another part of the skin. The parts affected with the eruption are often considerably swelled. In some persons the eruption lasts a few days only, in others many months, appearing and disappearing at intervals. Long weals are sometimes observed, as if the part had been struck with a whip. The little eminences always appear solid, not having any cavity or head containing either water or any other liquor. Intolerable itching is their invariable concomitant. They generally disappear in the day-time, and in the evening again break forth, accompanied with slight symptoms of fever. They terminate in a desquamation of the cuticle.

CAUSE.—Mechanical irritation; [use of shell-fish, lobsters, muscles; mushrooms; honey; and in infants by deteriorated breast-milk.]

TREATMENT.—Frequent cooling aperients; small doses of

the submuriate of mercury; nitrous acid; sudorifics; the antiphlogistic regimen; but remedies are seldom needed in so trivial a complaint.

R. Acidi nitrici diluti f. 3ss;
Syrupi mori f. 3j;
Aquæ destillatæ f. 3xij;

Misce pro potu ordinario.

When a chronic disease, it yields, occasionally, to serpentaria.

R. Radicis serpentariæ contusæ 3j;
Aquæ puræ f. 3xvj;

Coque per quadrantem horæ, dein cola.

R. Hujus decocti colati f. 3xij;
Tincturæ serpentariæ,
Syrupi aurantii, aa f. 3j;

Fiat haustus ter in die sumendus.

PEMPHIGUS.—VESICULAR FEVER.

SYMPTOMS.—The usual symptoms of the cold stage of fever; lassitude, headache, sickness, oppression, frequent pulse, in some instances delirium.

On an *uncertain day* an eruption of small pellucid blisters, similar to those produced by burning; varying in size, sometimes as large as walnuts, more frequently about the size of almonds; surrounded by an inflamed margin, or areola, and distended with a faintly yellow serum. They appear on the face, neck, trunk, arms, mouth, fauces, and sometimes extend along the whole alimentary canal; producing great difficulty of deglutition; pain referred to the stomach; nausea; frequent vomiting; sense of soreness in the abdomen; often bloody stools.

After the blisters have remained from one to several days, they either break, and discharge a yellowish, bland, or sharp ichorous fluid, or they begin to shrink, and in a short time disappear.

CAUSES.—Specific infection? This is yet undetermined: many contend that the ordinary causes of synocha and syno-

thus will produce it: whilst others maintain, that the disease is infectious, and arises from its peculiar poison. Most probably, the vesicular, like other eruptions, appears both in fevers which are, and which are not, infectious; so that the eruption will sometimes be propagated with the fever, and sometimes without it.

DIAGNOSIS.—The peculiar appearance of the eruption.

PROGNOSIS.—*Favourable*.—The vesicles few in number, and confined to external parts; the fever inclining more to the inflammatory than to the typhoid character.

Unfavourable.—The disease attacking the alimentary canal, attended with a rapid, small pulse; symptoms of confirmed typhus; the vesicles becoming livid, with sudden and great prostration of strength; delirium.

TREATMENT.—Added to the treatment proper for the concomitant fever, which is very generally an approximation to typhus:

An emetic at the commencement.

Submuriate of mercury in small and frequent doses.

Saline purges.

Antimonium tartarizatum, in small and frequent doses.

The larger vesicles should be opened and kept clean.

Demulcent and detergent gargles, when the mouth and fauces become the seat of the disease.—See Aphtha.

To diminish the effects of irritation, opium combined with sulphuric æther. [Oleaginous applications, milk diet, aperients; and should gangrene occur, it is to be treated on ordinary principles; wine, quinine, broths, &c. will be necessary.

All diseases of the skin may be divided into two classes: first, those preceded by fever; second, those unpreceded by fever. The first class comprises all eruptive fevers; the second, all cutaneous eruptions without febrile action. The former are to be treated according to the type of fever, as variola, rubcola, scarlatina, &c. The latter, by improving the digestive system, and by mercurial and antimonial alteratives. In almost all cases the eruption will be removed by this plan, especially in children; and local applications are seldom necessary. In obstinate cases, the various ointments

described in the Pharmacopœia, with warm and sulphurous baths, may become necessary. Most pathologists ascribed eutaneous diseases to irritation, inflammation, or ulceration of the gastro-intestinal mucous membrane.—See Aphtha.]

APHTHA.—THE THRUSH.

SYMPTOMS.—The mouth becomes redder than usual; the tongue swelled and rough; small whitish eschars or pustules invade the uvula, fauces, palate, tonsils, the inside of the cheeks, the gums, and lips. They generally commence at the uvula; are sometimes few and distinct, at others numerous and confluent; sending forth a glutinous mucus, which forms a thick whitish crust, adhering most tenaciously, and which falls off when the pustules have arrived at maturity, without inducing an eschar on the parts beneath. The disease sometimes extends to the œsophagus, stomach, and throughout the whole alimentary canal, when mucus is evacuated, in large quantities, by stool and vomiting; at others, to the trachea and bronchi, when it is brought up by coughing: aphthæ sometimes fall off in the space of ten or twelve hours, at others they remain attached for several days, and often a separation and reproduction take place a great number of times before the final solution of the disease.

CAUSES.—*Predisposing.*—Cold and moisture; debility.

Exciting.—Most frequently a derangement of the intestinal canal.

PROGNOSIS.—*Favourable.*—The aphthæ appearing of a white, pearly colour; falling off early, and leaving the parts they occupied clean, red, and moist. Salivation, or moderate diarrhœa, at the period of separation. When the disease is long protracted, repeated crops are more favourable than the permanence of the original.

Unfavourable.—The disease affecting internal parts; producing violent hiccup, oppression, pain referred to the stomach, vomiting, and sense of suffocation; the aphthæ being, from the first of a brown colour, or becoming so in the course of

the disease; their sudden disappearance; the mouth and fauces unusually pallid previous to the eruption; violent diarrhœa; coma; great prostration of strength; any of the symptoms of putridity accompanying cynanche maligna.—See *Cynanche*.—[Aphtha occurs in phthisis and other diseases, and is a sign of approaching dissolution.]

TREATMENT.—*Indications*.—I. To remove or moderate the concomitant fever.

II. To produce a separation of the aphthæ.

The first indication must be fulfilled,

By the means laid down for the treatment of synochus, typhus fever, and cynanche maligna, according as the fever assumes the character of the one or the other.

The second—

1. By emetics, when other means are resisted.
2. Gentle laxatives, as manna, rhubarb, and castor-oil.

R. Mannæ optimæ $\overline{3}$ ss;

Aquæ anethi f. $\overline{3}$ j;

Solve: capiat infans cochleare medium subinde.

R. Olei amygdalæ f. $\overline{3}$ v;

Syrupi rosæ f. $\overline{3}$ x;

Misce, cujus detur cochleare minimum pro re nata.

R. Mannæ optimæ $\overline{3}$ vj;

Pulveris rhei $\overline{3}$ ss;

Infusi sennæ f. $\overline{3}$ ix;

Fiat mistura, cujus sit dosis cochleare medium.

3. Copious emollient clysters.

R. Decocti avenæ tenuioris f. $\overline{3}$ ijj;

Olei olivæ f. $\overline{3}$ ss;

Misce pro enemate, octavâ quaque horâ, adhibendo.

Veal broth also, with turnip radishes boiled in it.

[The breast milk should be changed when deteriorated.]

Purgatives are more beneficial at the commencement of this disease, and towards the decline, than in the intermediate period. In the first they render the disease more mild than it would otherwise have been, and in the latter they are serviceable by clearing away the separated aphthæ; and good

castor oil is decidedly the best aperient in most cases. [Alterative doses of calomel, hydrargyrum cum creta, rhubarb, magnesia, with aromatic powder and pure sugar, are equally valuable.]

4. By tonic and stimulant gargles.

R. Decocti cinchonæ f. ʒvij;
Acidi sulphurici diluti f. ʒss;

Fiat gargarisma.

R. Decocti quercûs f. ʒvij;
Pulveris acaciæ ʒj;
Sodæ boratis purificatæ ʒj;

Fiat gargarisma.

R. Sodæ boratis purificatæ ʒjss;
Aquæ florum sambuci f. ʒvj;
Tincturæ myrrhæ,
Mellis rosæ, aa f. ʒss;

Fiat gargarisma.

R. Boli Armeniæ pulverisati ʒj;
Mellis despumati ʒjss;

Misce: cujus applicetur pauxillum frequenter partibus affectis.

R. Mellis boracis ʒj;
Aquæ puræ f. ʒvij;

Fiat collutorium sæpe utendum.

R. Herbæ agrimonie exsiccatæ ʒij;
Aquæ destillatæ Oj;

Coque, et liquorem frige factum cola.

R. Hujus colaturæ f. ʒvij;
Aluminis purificati ʒss;
Mellis despumati ʒss;

Fiat gargarisma.

The agrimony here mentioned, is the agrimonia eupatoria of Linnæus. It is much esteemed by some continental physicians, but in this country it gives way to more certain remedies.

R. Linimenti æruginis ʒss;
Mellis rosæ ʒjss;

Cujus applicetur pauxillum, ope penicilli, partibus affectis quartâ quaque horâ vel sæpius.

This preparation can only be used with adults, as children generally swallow some of it. It is mostly serviceable when the aphthæ remain foul and large after the fever has disappeared. [The chloride of lime is better, see p. 88.]

It sometimes happens that there is a great tendency to diarrhœa; in which case, absorbents, mild astringents, and opiates, are useful.

R. Magnesiae 3ss;
Cretæ preparatæ ʒj;
Confectionis aromaticæ ʒij;
Spiritus cinnamomi f. ʒss;
Aquæ anethi f. 3x;
Syrupi papaveris f. ʒij;

Fiat mistura, ejus capiat infans cochleare minimum tertiâ quaque horâ.

R. Misturæ cretæ f. ʒijss;
Confectionis aromaticæ 3j;
Tincturæ kino f. ʒss;
———— opii m xij;

Misce: sumat infans cochleare minimum secundâ vel tertiâ quaque horâ.

R. Confectionis aromaticæ 3ss;
Tincturæ kino f. ʒij;
Aquæ cinnamomi f. ʒjss;

Fiat mistura: sit dosis infanti cochleare minimum secundis horis.

[For various other gargles, see Cynanehe tonsillaris and C. maligna.]

[DISEASES OF THE HEART.]

Laennec, Bertin, and Bouillaud, consider that the symptoms of retarded circulation depend on a mechanical obstruction to the course of the blood, while Dr. Hope maintains that hypertrophy and dilatation can of themselves occasion the symptoms in question, and that these symptoms are seldom produced in any remarkable manner by mechanical obstruction, unless hypertrophy, dilatation, or softening of the heart is superadded. He also contends that the bellows

murmurs are caused by regurgitation through the valves, and arises from the motion of the blood: Laennec ascribed this murmur to the sound of the muscular contraction, which he pronounces to be wrong. It may exist independently of valvular disease, and depend on nervous action of the heart without any organic disease whatever. The purring tremor, the arterial thrill, throb, and murmur, bellows murmur, and the murmurs attendant on nervous action of the heart, are attributed by Dr. Hope to modifications in the motion of the blood, and explained according to the laws of hydraulics and acoustics. Ample and repeated observation have convinced him that incipient diseases are now as easily detected as other maladies, yield as readily to proper treatment, and even when advanced, admit of such palliation as not to curtail the patient's existence. He states that hypertrophy is a frequent cause of apoplexy, and, in most cases, when patients apparently in good health die suddenly, it is of the last disease. Again, he observes, that asthma is very frequently caused by disease of the heart; that there is scarcely a cardiac disease that does not induce enlargement of the liver and abdominal dropsy; that inflammation of the lungs is rapid and fatal when the centre of the circulation is in a morbid state; that acute rheumatism frequently causes carditis and pericarditis; and, lastly, that in fevers and inflammation, disease of the heart may impart deceptive characters to the pulse, as hardness, fulness, weakness, irregularity, &c.]

[PERICARDITIS.—INFLAMMATION OF THE PERICARDIUM.

SYMPTOMS.—Synocha, pungent, burning, lancinating pain in the region of the heart, shooting to the left scapula, shoulder, and arm, but rarely descending to the elbow; pain increased by inspiration, pressure between the præcordial ribs, and on pressing the left hypochondrium at the same time; inability of lying on the left side, or in any position except on the back; cough, hurried respiration, palpitation of the heart,

impulse generally violent, bounding, or feeble, fluttering, or irregular; pulse frequent, full, hard, jerking, and often with a thrill; or it may be small, feeble, intermittent, irregular, or unequal; extreme anxiety, sense of suffocation, sardonic grin, faintness, constant jactitation, insupportable distress and alarm, intumescence and lividity of the face and extremities from obstruction of the circulation; and, lastly, cold perspiration, and often œdema of the feet. Sometimes all these symptoms are absent.—*Latham and Andral*.

PHYSICAL SIGNS.—Impulse of the heart greatly increased, abrupt, and jerking, often shaking the anterior parietes of the chest: some beats are stronger than others; pulse full and jerking all over the body, sometimes accompanied with a thrill. This condition of pulse may exist six months after the disease has been cured; bellows murmur usually present.

In chronic pericarditis, the signs are the same, but in a less degree. When the patient emaciates and complains of fever after acute rheumatism, or after having received a blow over the region of the heart a few weeks or months previously, there is reason to suspect chronic pericarditis.

CAUSES.—Blows or excessive pressure on the præcordial region, inflammation extending in pneumonia and pleuritis, and above all, by metastasis of acute rheumatism. The causes of phlegmasiæ in general, cold, fever, &c.

PROGNOSIS.—The disease is one of the most fatal incidental to humanity, though easily cured if treated early.

TREATMENT.—Venesection to syncope; leeches to the amount of twenty or forty to the region of the heart; repetition of these measures in a short time if necessary. Cupping is a valuable remedy in debilitated or aged persons, and is more efficacious than leeches, because the blood is abstracted suddenly. Dr. Hope and others think local more efficacious than general bleeding in some cases. The antiphlogistic plan must be strenuously employed. When the symptoms continue, and there is reason to suppose that lymph has been effused, mercury will cause its absorption, as in iritis. Dr. Latham was the first to propose this remedy. Nauseating doses of tartarized antimony are also beneficial. When the

inflammation is reduced, Dr. Hope gives the following medicine :

R. Tincturæ hyosciami āā. ℥ xv—xx ;
 ———— digitalis,

Aquæ destillatæ ℥jss ;

Fiat haustus tertiis vel quartis horis bibendus.

During the acute stage of the disease, the use of warm turpentine fomentation is valuable, and preferable to repeated blisters.

When convalescence is established, there is great danger of a relapse.

In *chronic pericarditis*, blisters, setons, issues, antimonial ointment, and mercury, are the chief remedies. Adhesion of the pericardium is accompanied by enlargement of the heart, hypertrophy, and dilatation, and proves rapidly fatal, though it may continue for weeks or months. The physical signs are, prominence of the left præcordial ribs, a jogging motion of the heart, and the bellows murmur.]

[CARDITIS, OR INFLAMMATION OF THE MUSCULAR SUBSTANCE OF THE HEART.

This disease may be general or local. Laennec doubted if it was ever general, but Latham has published a perfect example, and Hope is of opinion that the inflammation in pericarditis extends to the heart. The treatment is the same as in pericarditis. Partial carditis, with abscesses, are described by Bonetus, Morgagni, and Senac ; while ulceration on the surface is described by Borrichius, Peyer, and Graetz.

Corvisart, Laennec, Bertin, Bayle, and Cullerier, describe rupture of the fleshy columns and valves of the heart. Gangrene of the heart has not as yet been proved to exist.]

ORDER IV.

HÆMORRHAGIÆ.

DISCHARGES OF BLOOD.

CHARACTER.

Pyrexia, with a profusion of blood, without any external violence; the blood drawn from a vein having the same appearance as in the phlegmasiæ.

The pyrexia is mostly exquisitely synochal; the heat considerable, and the pulse almost peculiar and well marked. It is usually the *pulsus dicrotus*, or rebounding pulse; so called, because its action conveys the idea of a double pulsation. In the diseases of this order there is generally an obvious plethora of the vascular system, known by the peculiar pulse just mentioned, by the morbid determination of blood to the part from which the blood proceeds, and by a febrile irritation, which strongly point out an *hæmorrhagic diathesis*.

GENERA.

EPISTAXIS,	or	Blceding from the nose.
HÆMOPTYSIS,	—	Spitting of blood.
HÆMATEMESIS,	—	Vomiting of blood.
HÆMORRHOIS,	—	Piles.
MENORRHAGIA,	—	Flooding.
HÆMATURIA,	—	Voiding of blood by urine.

GENERAL CAUSES.

External heat; sudden diminution of the weight of the atmosphere; whatever increases the force of circulation; as, violent exertions of the body in general, or violent action in a particular part; particular postures of the body; ligatures producing local congestion; exposure to cold; external violence.

GENERAL TREATMENT.

Indications.—I. To put a stop to the discharge of blood.

II. To prevent its recurrence, by removing the causes by which it was excited.

III. To destroy the inflammatory diathesis.

[Acetate of lead, with the liquor opii sedativus, or the acetate of morphia, is the only effectual astringent in hæmorrhages; and will generally succeed, unless large vessels are ruptured. It may be given to the amount of ten grains daily, provided a small quantity of diluted acetic acid is added.]

EPISTAXIS.—HÆMORRHAGE FROM THE NOSE.

SPECIES.—1. *Epistaxis juniorum*; with signs of arterial plethora.

2. *Epistaxis senum*; with signs of venous plethora.

SYMPTOMS.—Sense of weight, and obtuse pain in the head; redness of the cheeks; inflation of the face, and of the vessels of the neck and temples; tinnitus aurium; heavy pain, prominence and dryness of the eyes; vertigo; itching of the nostrils, and sense of weight about the root of the nose; in some instances, disturbed sleep and dreadful dreams; costiveness; diminished secretion of urine; coldness of the extremities; tension of the right hypochondrium; these succeeded by a profusion of blood from the nostrils.

CAUSES.—*Predisposing*.—A certain age; the period of puberty, and the decline of life; plethoric state of the system; peculiar weakness of the vessels of the part.

Exciting.—External heat; violent exertion; cold applied to the body; particular postures of the body; external violence.

TREATMENT.—The *indications* mentioned in the general treatment of Hæmorrhage will be answered:—

I. By the local means recommended in surgical works; erect position of the body, with the head somewhat reclined backwards; free exposure to cool air; cold applied to the neck, or immersion of the head in cold water; or by covering the head with a bladder half filled with water impregnated with nitrate of potass and muriate of ammonia; affusion of cold water over the genitals; and astringent injections; but the

most effectual and certain is plugging up the posterior and anterior nostrils with dossils of lint; a coagulum of blood will form between them, and the hæmorrhage will cease, [unless an artery has burst, when it may prove fatal.]

R. Zinci sulphatis ʒj;
Aquæ destillatæ f. ʒx;

Fiat injectio subinde utenda.

R. Tincturæ muriatis ferri f. ʒj;
Aquæ destillatæ f. ʒvj;

Fiat injectio.

R. Aluminis purificati ʒj;
Acidi acetici f. ʒj;
Aquæ destillatæ f. ʒvj;

Fiat injectio.

The second and third indications will be fulfilled by,

1. The means that obviate plethora, as the antiphlogistic diet, general and local blood-letting, purging, and diaphoretics. These remedies are more particularly required when the fever is considerable and the pulse strong.

2. *Refrigerants* and *diaphoretics*; as, nitrate of potass and antimonium tartarizatum.

R. Potassæ nitratis gr. vj;
Liquoris antimonii tartarizati ℥ xv;
Aquæ destillatæ f. ʒxij;
Syrupi croci f. ʒj;

Fiat haustus sextis horis sumendus.

3. *Astringents*; especially sulphate of zine, alum, and acetate of lead with opium, [the last is the best.]

R. Zinci sulphatis gr. $\frac{1}{4}$;
Aluminis purificati gr. x;
Infusi rosæ f. ʒxij;
Syrupi ejusdem f. ʒj;

Fiat haustus sextis horis capiendus.

R. Plumbi acetatis gr. j–iij;
Liquoris opii sedativi ℥ x;
Aquæ cinnamomi f. ʒv;
—— destillatæ f. ʒx;
[Acidi acetici diluti ʒss;]
Syrupi aurantii f. ʒj;

Fiat haustus octavis horis sumendus.

R. Plumbi acetatis gr. j;
 Extracti opii gr. $\frac{1}{4}$;
 ————— glycyrrhizæ gr. iv;
 Fiat pilula ter in die capienda, superbibendo cyathum
 decocti hordei.

4. *Sedatives*; especially digitalis and nitrate of potass.

R. Tincturæ digitalis m x-xxx;
 Potassæ nitratis gr. vj;
 Aquæ menthæ viridis f. 3xij;
 Syrupi croci f. 3j;
 Misce, pro haustu sextâ quaque horâ sumendo.

HÆMOPTYSIS.—SPITTING OF BLOOD.

SPECIES.—1. *Hæmoptysis plethorica*; occurring without any external cause, without previous cough, or suppression of any usual evacuation.

2. *Hæmoptysis violenta*; occurring on the application of external violence.

3. *Hæmoptysis phthisica*; occurring after long-continued cough, with wasting and debility.

4. *Hæmoptysis calculosa*; bringing up small calcareous pustules mixed with the sanguineous sputum.

5. *Hæmoptysis vicaria*; occurring after the suppression of some accustomed evacuation.

SYMPTOMS.—Sense of weight and oppression in the chest; dry tickling cough; peculiarly hard jerking pulse; difficulty of breathing; sense of pain and heat, referred to the sternum; saltish taste in the mouth; flushed countenance; constant irritation at the top of the larynx, which excites hawking and coughing, during which the profusion of blood takes place. [The chest affords the natural sound on percussion, and the mucous râle is very distinct. The disease may be periodical, or supervene on the suppression of an habitual sanguineous discharge, as menstruation, or the hæmorrhoidal flux. The disease is caused by an exhalation on the mucous membrane in most cases, as there is no erosion or breach of surface found on dissection. It may, however, be caused by the rupture

of a blood-vessel, when the hæmorrhage will be more copious. It often precedes consumption, but it may continue for several years and occur daily though the patient is otherwise in excellent health. The editor has a patient, at this time, who has had it daily for the last twenty years. He is in good health and very corpulent. In general it is a symptom of consumption.]

CAUSES.—*Predisposing.*—A certain age; from the period of puberty to the thirty-fifth year; sanguineous temperament; great sensitiveness and irritability; suppression of usual evacuations; narrow conformation of the chest; previous affections of the same disease; hereditary predisposition; plethora.

Exciting.—Excessive heat of the atmosphere; violent exercise; inordinate exertion of the organs of respiration; external violence; [depressing passions; venery.]

DIAGNOSIS.—The blood being brought up by hawking and coughing; of a florid red colour; and mixed with a little frothy mucus; reference to the predisposing causes.

From hæmatemesis.—The blood thrown up in hæmatemesis is usually in much more considerable quantity; of a darker colour; more grumous; mixed with other contents of the stomach; and usually unattended with cough.

PROGNOSIS.—*Favourable.*—The disease arising from common causes only, and not from hereditary predisposition to phthisis, or malconformation of the pulmonary system. The blood being small in quantity, and of a bright red colour. Its not being followed by cough, dyspnœa, pain, or other affection of the lungs. [The attack being periodical, and the patient being otherwise in good health.]

Unfavourable.—The reverse of the above.

TREATMENT.—*Indications.*—The same as enumerated for the general treatment of Hæmorrhagy, which will be answered by,

1. Avoiding heat, every kind of bodily exertion, [and conversation.]
2. Making use of a light *vegetable diet*.
3. *Bleeding*, where symptoms of inflammatory diathesis are indicated by the hardness and peculiar jerk of the pulse; the

constitution of the patient; and the florid colour of the blood evacuated from the lungs.

On the contrary, where there are marks of debility and laxity, and the blood is of a dark colour, depletion is improper, [or in nervous sensitive persons.

Leeches to the anus when hæmorrhoids have existed, and to the hypogastrium, or genital fissure, when the catamenia are suppressed.

When the hæmorrhage is copious, it arises from pulmonary apoplexy, or congestion, or from a ruptured vessel, and then copious depletion is necessary.

When the disease is intermittent, or attacks nervous persons, or those of a scorbutic habit, quinine is a most useful remedy.]

4. *Cooling purges*, of the sulphate of magnesia or soda, in infusion of roses.

R. Infusi rosæ f. ℥vij;
Magnesiæ sulphatis ʒvj;
Syrupi rosæ f. ℥ss;

Fiat mistura, ejus capiat æger cochlearia iv. sextâ quaque horâ.

5. *Refrigerants*; nitrate of potass; sulphuric acid; citric acid, tamarinds, &c.

R. Infusi rosæ f. ℥ij;
Potassæ nitratis ʒss;
Tincturæ opii ℥v;

Fiat haustus tertiâ vel quartâ quaque horâ sumendus.

[The French use half-ounce doses of nitre given in mulage.]

R. Acidi sulphurici diluti ℥xv;
Aquæ destillatæ f. ℥xv;
Tincturæ opii ℥v—xv;
Syrupi rosæ f. ℥ij;

Fiat haustus tertiâ vel quartâ quaque horâ capiendus.

R. Potassæ supertartratis ʒij;
Potassæ nitratis ʒij;

Misce: capiat æger ʒss. pro dosi ex cyatho parvo aquæ hordei.

Draughts of cold water acidulated with lemon-juice.

6. *Astringents*; the vegetable acids; acetate of lead; tinctura styptica; but especially the acetate of lead in combination with opium, which proves the most certain styptic when the febrile state is removed, and it agrees with the bowels.

R. Plumbi acetatis gr. vj;
 Extracti opii gr. iij;
 Confectionis rosæ caninæ q. s.;

Fiat massa in pilulas sex æquales dividenda. Sit dosis una vel altera bis, ter, quaterve in dies.

R. Plumbi acetatis,
 Pulveris digitalis, āā gr. j;
 Extracti opii gr. $\frac{1}{4}$;
 ——— glycyrrhizæ gr. iij;

Fiat pilula ter in die sumenda, superbibendo cyathum vinosum alieujus liquoris idonei. Or,

The acetate of lead draught, directed page 100.

R. Tincturæ saturninæ ℥ xx—xl;
 Aquæ destillatæ f. 3xij;
 Syrupi simplicis f. 3j;

Fiat haustus ter in die sumendus.

[The lead may be increased to ten or fifteen grains daily.]

7. *Sedatives*; digitalis; hyosciamus; conium.

R. Plumbi acetatis gr. j;
 Extracti hyosciami gr. v;
 Pulveris ipecacuanhæ compositi gr. ij;

Fiat pilula octavâ quaque horâ deglutienda.

R. Extracti hyosciami gr. ij—xv;
 ——— conii gr. iij;

Fiat pilula sextis horis sumenda.

R. Extracti hyosciami gr. ij—x;
 Pulveris digitalis gr. j;

Fiat pilula sextâ quaque horâ sumenda.

R. Tincturæ digitalis ℥ x—xxx;
 Acidi sulphurici diluti ℥ xv;
 Aquæ menthæ viridis f. 3xij;
 Syrupi rhæados f. 3j;

Fiat haustus sextis horis sumendus.

8. Emetics are recommended by Dr Darwin [and others.]

9. Nauseating medicines; antimoniium tartarizatum in small and repeated doses.
10. Inhaling sedative airs; hydroearbonate.
11. Limited use of liquids.
12. Cold lotions applied [to the chest]; vinegar and water; a solution of muriate of ammonia.

Where symptoms of debility prevail, blisters to the chest; [quinine;] opium; chalybeates.

HÆMATEMESIS.—VOMITING OF BLOOD.

An hæmorrhage of dark-coloured, grumous blood from the stomach, in a greater or less quantity, mixed with alimentary matter, and preceded by a sense of weight and obtuse pain or anxiety in the region of the stomach.

CAUSES.—The general causes of hæmorrhage, as plethora, suppression of evacuations, &c.; tumours compressing the liver or spleen; external violence; obstructions in any neighbouring viscus; [rupture of a blood vessel, as in the case of King George IV.; or there may be no erosion or abrasion of the gastric mucous membrane, in which case the hæmorrhage will be sparing. The fluid is exhaled from the mucous membrane, and this is congested, red or livid in patches, which retain their colour, though submitted to frequent ablution.]

PROGNOSIS.—Hæmatemesis seldom proves fatal from the loss of blood, but it often induces very considerable weakness. When the bleeding is symptomatic of some other disease, then the prognosis should depend on the probability of its being cured.

TREATMENT.—*Indications.*—See the general treatment of Hæmorrhagy.

If accompanied by symptoms indicating an inflammatory diathesis, bleeding, and the antiphlogistic regimen, with digitalis.—If not, tonics and astringents; sulphuric acid with opium.

Iced water, or lemon, or any water ice, a small quantity at a time, [and pounded ice to the epigastrium.]

The acetate of lead, as directed in Hæmoptysis.

R. Infusi rosæ f. 3xij;
Acidi sulphurici diluti ℥ x;
Syrupi rosæ f. 3j;
Tincturæ opii ℥ x;

Fiat haustus omnî horâ, vel bilioriô, sumendus.

R. Aluminis purificati ʒss;
Infusi rosæ f. 3xij;
Acidi sulphurici diluti ℥ x;
Tincturæ opii ℥ x;

Fiat haustus secundâ vel tertiâ quaque horâ adhibendus.

When the hæmorrhage has ceased, infusion of roses with excess of sulphuric acid should be given regularly every four or six hours, and the bowels should be kept open by proper doses of the sulphate of magnesia, or soda, or the soda tartrazata in the almond mixture. [When the disease is caused by suppression of the hæmorrhoidal or catamenial flux, leeches should be applied to the anus or vagina, together with other appropriate remedies for such diseases.]

The tinctura ferri muriatis ℥ xx. ad. xxx. omnî horâ, in a small wine-glass full of water.

The union of decoctum cinchonæ with acidum sulphuricum. [Quinine draughts, see p. 78.]

Alum, in the dose of ten grains every four hours.

Epispastics to the abdomen, if there be pain, [and sinapisms to the legs.]

If the existence of scirrhus tumours can be ascertained, hydrargyrum; conium; [iodine;] and other remedies recommended for such diseases. [When vomiting blood is caused by rupture of a large vessel or tumour, all remedies will fail to restrain it. When the disease occurs in delicate or scorbutic habits, tonics, quinine, and rhatany are the best remedies. In some cases, a considerable quantity of dark-coloured grumous fluid is vomited, and mistaken for the disease under consideration. According to Dr. Sigmond and Dr. Patterson, death may occur in a few hours without rupture of the gastric mucous membrane.]

HÆMORRHOIS.—THE PILES.

SPECIES.—1. *Hæmorrhoids tumens*: from external tumours.

2. *Hæmorrhoids procidens*: from protusion of the anus.

3. *Hæmorrhoids fluens*: bleeding piles, internal, without external tumour or protrusion of the anus.

4. *Hæmorrhoids cæca*: blind piles, with pain and tumour of the anus, without effusion of blood.

CHARACTER.—Small tumours on the verge of the anus, or a number of varicose veins surrounding it: [itching, weight, tension, and a sense of bearing down, or] pungent pains in the fundament [or perineum]; more especially upon going to stool; pain in the back or loins; vertigo; head-ache; discharge of blood from within the anus; [frequent desire to go to stool; tortuous or enlarged veins; hard tumours, sometimes indolent or painful; excoriation or erythema about the anus.]

CAUSES.—Habitual costiveness; plethoric state of the vessels; hard riding; excesses of various kinds; the suppression of some long-accustomed evacuation; the use of strong aloetic purgatives; pressure of the abdominal viscera on the hæmorrhoidal veins, [by pregnancy or curvature of the spine.

Anatomical Characters.—The veins may be enlarged, the cellular tissue thickened, or the morbid growth may resemble parenchymatous or erectile tissue.]

PROGNOSIS.—The only unpleasant consequence in general to be apprehended from piles, is the presence of inflammation, which may induce suppuration, and the disease degenerate into fistula. When a venous plethora exists, which is often the case in old age, bleeding piles are salutary, and their suppression followed by apoplexy. [Piles often relieve affections of the head, chest, abdomen, and uterus.]

TREATMENT.—*Indications.*—See the general treatment of Hæmorrhage. When the hæmorrhage is considerable, so as to occasion great debility, recourse must be had to astringents, both locally and internally.

The best way to stop the hæmorrhage when extremely

profuse, is by pressure. Various means have been recommended, as introducing a pig's or sheep's gut, and filling it with water; but these are nasty and unnecessary: the pressure should be made by dossils of lint or the finger. The following are the best local astringents:

R. Sulphatis zinci 3j;
 Aquæ destillatæ f. 3x;
 Fiat injeetio frigide injicienda.

R. Sulphatis zinci,
 Aluminis purificati, āā 3ss;
 Aquæ destillatæ Oj;
 Fiat injeetio.

R. Aluminis purificati 3j;
 Decoeti quereûs Oj;
 Fiat injectio.

R. Liquoris plumbi acetatis f. 3j;
 Misturæ camphoræ f. 3ij;
 Aquæ destillatæ Oss;
 Fiat [solutio in rectum opê sephuneuli injieienda.]

Ice applied by introducing a small piece into the rectum.

If these are insufficient, astringents should be directed internally. [The best are the acetate of lead and opium.]

R. Aluminis gr. v;
 Acidi sulphurici diluti ℥ xxx;
 Infusi anthemidis f. 3xij;
 Syrupi aurantii f. 3j;
 Tineturæ opii ℥ vj;
 Fiat haustus ter in die sumendus.

R. Aluminis purificati 3ss;
 Kino gr. viij;
 Confectionis opii 3ss;
 Fiat bolus sextis horis sumendus.

[If the pile is an enlarged vein, and this becomes strangulated by the spasm of the sphincter ani, it should be compressed and flattened with the finger and passed into the rectum. This plan may be repeated frequently. A T bandage may become necessary. The hip-bath facilitates the reduction of strangulated piles.]

When the tumours about the anus are painful, and when inflammation attends, leeches should be applied, and cooling lotions or solutions of lead [or cold poultices]

The inflammation often runs high, and produces a considerable degree of fever. The antiphlogistic diet is then necessary, and the means recommended against synocha fever.

In all cases of hæmorrhoids the bowels should be kept loose, as the irritation of hardened fæces both before and during their passing over the piles, creates much distress. Oleaginous purges are most serviceable, though sulphur is the most generally resorted to.

[R. Sulphuris loti,
Potassæ supertartratis, āā ʒj;
Pulveris jalapæ ʒj;
———— cinnamomi compositi ʒj;
Mellis vel theriacæ q. s.;

Fiat electuarium ejus capiat cochleare medium bis vel ter in die.]

When, instead of being inflamed, the tumours are relaxed and flaccid, and at the same time irritable, astringent applications should be used, as galls, oak-bark, balsam of copaiba, and cold; and astringents taken internally are likewise beneficial.

R. Gallæ pulveris ʒj;
Camphoræ ʒss;
Tincturæ opii f. ʒij;
Cerati ʒj;

Tere simul ut fiant unguentum quo partes affectæ nocte manequè illinantur.

R. Gallæ contusæ ʒss;
Aquæ destillatæ Oij;

Coque per sextam horæ partem, dein cola pro fomento bis in die applicando.

[The introduction of a piece of tallow candle, and this allowed to melt in the rectum, affords great relief. A suppository of simple cerate and opium is also a good remedy.]

When, in consequence of a long continuance of the disease, the rectum has become much affected and weakened, and excrescence or fistulæ are threatened, Dr. Ward's celebrated

paste has been of great service. [Tonics and chalybeates are necessary in debilitated constitutions.]

CONFECTIO PIPERIS NIGRI.

R. Radicis enulæ campanæ,
Piperis nigri, singulorum ℥ss;
Seminis fœniculi dulcis,
Mellis despumati, āā ℥j;

Fiat pasta, de qua capiat quantitatem nucis moschatæ bis terve die.

[If the tumours close the anus, we must introduce a common candle, an oiled bougie, tents, or a piece of sponge well oiled. Patients affected with piles should sleep on a hair mattress, sit as little as possible, and if sedentary or literary, pursue their avocations in the erect posture. The bowels should be opened daily either by coarse bread, or the electuary of sulphur, or castor oil.

When these means fail, the tumours may be removed by excisions.]

MENORRHAGIA.—IMMODERATE FLOW OF THE MENSES.

A flow of the menses is to be considered as immoderate, when it either returns more frequently than what is natural, continues longer than ordinary, or is more abundant than is usual with the same person at other times.

It may be the effect of two different and opposite states of the system: plethora with inordinate arterial vigour; and general relaxation or debility.

SPECIES.—1. *Menorrhagia rubra*; bloody, in women not pregnant nor in child-bed.

2. *Menorrhagia abortûs*; bloody, in women pregnant.

3. *Menorrhagia lochialis*; bloody, in women in child-bed.

4. *Menorrhagia vitiorum*; bloody, from local disease.

SYMPTOMS.—An immoderate flow of the menses, arising from plethora, is usually preceded by rigors, acute pains in the head and loins, thirst, turgid flushed countenance, universal heat, and a strong, hard pulse; on the contrary, where

the symptoms of debility are prevalent in the system, the pulse is small and feeble, the face pallid, the respiration short and hurried on the slightest effort; the general leucophlegmatic appearance of the patient indicates a laxity of every muscular fibre; the pains of the back and loins are rather aching than acute.

CAUSES.—The causes which predispose to the disease are plethora; a laxity or debility of the organ, arising from frequent parturition; difficult and tedious labours, or repeated miscarriages; a sedentary and inactive life, indulging much in grief and despondency; living upon a poor, low diet; drinking freely of warm enervating liquors, such as tea and coffee; and living in warm chambers.

The exciting causes of menorrhagia are, violent exercise, more especially in dancing; strokes or concussions on the belly; strains; passions of the mind; violent straining at stool; excess in venery, particularly during menstruation; the application of wet and cold to the feet; organic affections of the uterus, such as schirrus, polypus, &c.

PROGNOSIS.—Menorrhagia, when it is the effect of plethora, rarely proves fatal; but when it occurs in habits much reduced by previous disease, or is produced by a laxity of the vessels of the organ, is profuse, long-continued, or of frequent recurrence; if the lips, nails, and other parts be pale; if the extremities become cold, and with these symptoms the patient falls into syncope, especially if there be any convulsions of the limbs, the danger is very great. When it arises from an organic affection of the part, which is frequently the case after the age of forty-five, it is usually incurable.

TREATMENT.—The cure of menorrhagia consists in,

1. Reducing the synocha-febrile symptoms when urgent, by general blood-letting, and the means recommended against inflammatory fever; strictly confining the patient to an horizontal posture; and avoiding every exertion both of body and mind.

2. Keeping the body gently open with laxative medicines that have but little stimulus.

Any of the common saline aperients, with infusion of roses, camphor, or almond mixture, in small and repeated doses.

R. Potassæ tartratis $\bar{3}$ ss;
 Mannæ optimæ $\bar{3}$ vj;
 Aquæ menthæ viridis f. $\bar{3}$ vi;
 Tincturæ lavendulæ compositæ f. $\bar{3}$ ss;

Fiat mistura, cujus capiat ægra cochlearia tria, pro re nata.

R. Magnesiæ sulphatis $\bar{3}$ ij;
 Aquæ frigidæ f. $\bar{3}$ x,

Fiat enema.

3. Administering draughts of acidulated cold liquors frequently, as infusion of roses, lemonade, and the like.

4. The internal use of styptics, especially the acetate of lead, as directed against hæmoptysis, when the febrile symptoms are subdued. [The muriated tincture of iron is extremely valuable as an astringent.]

5. When symptoms of debility are present, tonic astringents; [quinine,] cinchona, cascarilla, kino, quercus, and wine.

6. The constant application of astringents to the vagina and hypogastric region; especially ice, very cold water, or vinegar and water. [Vaginal injection must be tried in bad cases; equal parts of the liquor aluminis compositus and water will be beneficial. Ice may be passed into the vagina with advantage.]

HÆMATURIA.—VOIDING OF BLOOD BY URINE.

SYMPTOMS.—An evacuation of urine, mixed with blood, preceded, when not the effect of injury, by pain, and sense of weight, in the loins; pain and heat in the region of the kidney.

CAUSES.—It is most frequently symptomatic of other renal affections—especially inflammation of the kidney and calculus. Or it arises from external violence, or great exertion. It may

be produced by any of the causes of hæmorrhage, [or by excessive venereal indulgence.]

DIAGNOSIS.—It is distinguished from the high-coloured urine attendant on many diseases, by the deposit of a coagulum to the bottom of the vessel, and by its staining linen of a red colour.

TREATMENT.—If the disease be the consequence of injury, or the patient be of a full plethoric habit, bleeding, refrigerants, as advised under the head of Hæmoptysis.

The saline purges of the sulphate of magnesia or soda.

Astringents; infusion of roses with an additional quantity of sulphuric acid; uva ursi; soda water; opium; persicaria; [pariera brava.]

R. Confectionis rosæ gallicæ ʒj;

Infusi rosæ ferventis Oj;

Macera per horam dimidiam et cola:

R. Hujus colaturæ f. ʒxij;

Aeidi sulphurici diluti m℥ x;

Fiat haustus ter in die sumendus.

R. Foliorum uvæ ursi contusorum ʒss;

Aquæ ferventis Oj;

Macera, et liquorum frige factum cola:

R. Hujus infusi f. ʒviij;

Tincturæ kino,

Syrupi zingiberis aa f. ʒss;

Fiat mistura quotidie, partitis haustibus, haurienda.

R. Extraeti opii gr. $\frac{1}{4}$;

———— papaveris gr. viij;

Fiant pilulæ duæ ter in die sumendæ.

R. Foliorum persicariæ exesorum ʒj;

Radicis glycyrrhizæ exesæ ʒss;

Aquæ destillatæ Oj;

Decoque ad ʒxij; dein cola, pro potu, in dies sumendo.

If it arise from irritation of the kidney by calculus, together with the remedies proper for that disease, frequent draughts of mucilaginous liquids; as thick barley-water, solution of gum

acacia, decoction of marsh-mallows sweetened with honey; opium; copious emollient clysters.

Should there be concomitant symptoms of debility, powerful astringents; alum; tinctura muriatis ferri; terebinthina; [acetate of lead with opium, &c.]

R. Aluminis purificati ℥ss;
Pulveris kino gr. v.;
Fiat pulvis ter in die sumendus.

R. Tincturæ muriatis ferri ℥x;
Aquæ cinnamomi f. ʒxij;
Fiat haustus ter in die sumendus.

R. Terebinthinæ de Chio ʒj;
Kino pulveris ʒss;
Fiant pilulæ xxiv. quarum capiat æger tres ter in die.

R. Olei terebinthinæ rectificati f. ʒiij;
Ovi vitellum unius,
Sacchari purificati ʒss;
Aquæ destillatæ f. ʒviij;
Misce ut fiat mistura, ejus capiat æger cochlearia tria magna ter in die.

[When there is pain in the loins, leeches should be applied. If the bleeding is profuse, a cold hip bath, or cold to the hypogastrium or perineum. If the blood coagulates in the bladder, it gives rise to difficult micturition, and requires catheterism. In such cases, the injection of warm water, decoction of marsh-mallows, or poppies, by means of the double syringe, or a gum elastic bottle, is productive of great benefit. This plan was recommended some years ago by Mr. Jesse Foote, and is now very much employed by Mr. Costello as a preparatory step in his lithotritic operations, and by M. Civiale of Paris, the inventor of lithotrity.]

ORDER V.

PROFLUVIA.—FLUXES WITH FEVER.

CHARACTER.

Pyrexia, with an increased secretion, not naturally bloody.

GENERA.

CATARRHUS,	or	Catarrh.
DYSENTERIA,	--	Dysentery.

CATARRHUS.—CATARRH OR COLD.

SPECIES.—1. *Catarrhus a frigore*, common cold.

2. *Catarrhus contagiosus*, the influenza.

An increased secretion of mucus from the mucous membrane of the nose, fauces, and bronchi, attended with pyrexia.

SYMPTOMS.—Pyrexia; weight and pain in the head; oppression of the chest, and impeded respiration; sense of fullness and stopping up of the nose; watery inflamed eyes; coryza; cold shiverings, succeeded by transient flushes of heat; soreness of the fauces and trachea; cough; pains about the chest; rheumatic pains in the neck and head; increased secretion of mucus from the mucous membrane of the nose, fauces, and bronchi. [It may be acute or chronic, and is designated *pulmonary* when the bronchial mucous membrane is affected. It varies in intensity, and may resemble phthisis pulmonalis, for which it has been often mistaken. The expectoration may be clear, glairy, or viscid; and the more tenacious, the greater is the inflammation. Sometimes the sputa are of different colours, whites, greenish, or yellowish, and may be accompanied by night sweats and marasmus. Catarrh is either dry, humid, or suffocative.]

CAUSES.—*Remote*.—Cold applied to the body; contagion.

Proximate.—An inflammation of the mucous membrane of the nose, fauces, bronchi, &c.

Prognosis.—It is seldom attended with danger, when in a mild form, and arising from common causes.

Unfavourable.—Predisposition in the constitution to phthisis; tendency to asthma, or pneumonitis.

[*Anatomical characters.*—Redness of the tracheal or bronchial mucous membrane to a greater or less extent. This redness is observed most commonly at the termination of the trachea and in the first *division* of the bronchi. There may be purulent expectoration though the mucous membrane appears perfectly healthy.—*Bayle and Andral.*]

TREATMENT.—*Indications.*—I. To reduce the febrile action of the system.

II. To allay the irritation of the affected parts.

[When the disease is violent or suffocating, then the ramifications of the bronchi are affected, and large doses of tartarized antimony are indispensable.]

General bleeding may be necessary, if the type of the fever is synochal, and the symptoms are violent: in such cases purges will be beneficial, saline diaphoretics, and the anti-phlogistic diet, as recommended against synocha, or inflammatory fever. [Leeching or cupping in some cases.]

When the system evinces typhoid actions, the contrary must be observed. [The warm, vapour, or foot bath, at bed-time, with warm punch or negus, is the best remedy in mild cases and in nervous habits.]

The second indication requires,

1. Frequent use of tepid diluents, mucilaginous and oily demulcents, [which allay cough by sheathing the fauces and preventing the contact of the air.]

R. Cetacei ʒij;
Ovi unius vitellum,
Syrupi aurantii f. ʒss;
Aquæ cinnamomi f. ʒij;
—— destillatæ f. ʒiv;

Fiat mistura, cujus capiat æger cochleare magnum frequenter.

R. Olei amygdalæ f. ʒvj ;
 Syrupi tolutani f. ʒj ;
 Aquæ destillatæ f. ʒv ;
 Liquoris potassæ subcarbonatis q. s. ;
 Fiat emulsio, cujus sumantur cochlearia duo secundâ
 quaque horâ, vel urgenti tusse.

R. Mucilaginis acaciæ f. ʒiss ;
 Aquæ cinnamómi f. ʒv ;
 Syrupi mori f. ʒj ;
 Misce, cujus sit dosis cochleare medium, urgenti tusse.

Barley-sugar, lozenges, barley-water with capillaire, raspberry vinegar diluted, and the like, are very serviceable.

2. Mild expectorants and diaphoretics.

R. Aceti scillæ f. ʒj ;
 Aquæ menthæ viridis f. ʒv ;
 Syrupi croci f. ʒj ;
 Misce, cujus sumat cochleare magnum quando raucedo
 urget.

R. Oxymellis scillæ f. ʒss ;
 Spiritûs ætheris nitrici f. ʒij ;
 Aquæ menthæ viridis f. ʒv ;
 Syrupi aurantii f. ʒiij ;
 Fiat mistura, de qua capiat æger cochleare magnum
 subinde.

R. Potassæ nitratis ʒj ;
 Misturæ amygdalæ f. ʒvij ;
 Tincturæ scillæ f. ʒj ;
 Syrupi tolutani f. ʒss ;
 Misce : sit dosis cochleare magnum subinde.

3. Mild opiates and diaphoretics when the inflammatory diathesis is reduced. [Belladonna, syrup of white poppies, and lactucarium are preferred by the French, especially when there is urgent cough without expectoration.]

R. Syrupi papaveris f. ʒj ;
 Potassæ nitratis ʒj ;
 Aquæ menthæ viridis f. ʒvj ;
 Fiat mistura, cujus capiat æger cochleare magnum ur-
 genti tusse.

R. Syrupi papaveris f. $\mathfrak{z}\text{j}$;
 Oxy mellis scillæ f. $\mathfrak{z}\text{ss}$;
 Aquæ menthæ viridis f. $\mathfrak{z}\text{vj}$;

Fiat mistura, cujus sumantur cochlearia duo magna tertiâ quaque horâ.

R. Pulveris ipecacuanhæ compositi gr. ijss;
 Confectionis rosæ q. s.;

Fiat pilula quartâ quaque horâ sumenda.

The trochisci glycyrrhizæ cum opio.

R. Decocti hordei compositi f. $\mathfrak{z}\text{xivss}$;
 Syrupi papaveris f. $\mathfrak{z}\text{jss}$;

Misce, cujus capiat æger cyathum vinosum parvum secundâ quaque horâ.

4. Blisters to the breast, if there be uneasiness there, or pain, or difficult expectoration, or sense of oppression. [Fomentation with tepid oil of turpentine acts more speedily.]

5. Inhaling the steam of warm water [with vinegar.]

6. Occasional laxatives.

[When children are affected, emetics of the antimonial or ipecacuan wines are extremely beneficial; but these are contra-indicated if gastro-intestinal irritation is present.

When catarrh is chronic, and no sign of pulmonary congestion or inflammation present, we should use antimonial ointment, or repeated blisters to the chest, and hydrocyanic acid, and if these fail, we may employ inhalations of tar, iodine, or chlorine vapour. Terebinthinate and balsamic medicines often diminish expectoration in such cases. Sometimes chronic catarrh arises from the suppression of some disease, as cutaneous eruption, hæmorrhoids, an old ulcer, &c., and in such the disease may resist all ordinary remedies, and can only be removed by re-establishing the suppressed complaint; and if this is impossible, by supplying its place by a seton or issue.

It is of great importance to prevent the recurrence of catarrh in delicate or consumptive persons, and to accomplish this, such subjects should avoid exposure to cold and moisture by residing in a temperate climate, where this is practicable, by wearing flannel next the skin, warm clothing, and above all, by keeping the feet warm.]

DYSENTERIA.—CÆCO-COLITIS.—DYSEN- TERY.

SYMPTOMS.—The disease sometimes comes on with cold shiverings and other symptoms of fever; at others, the local affection is first perceived; costiveness; unusual flatulence in the bowels; severe griping, [or tormina;] frequent inclinations to go to stool; tenesmus; [cramps of the limbs;] loss of appetite; nausea; vomiting; febrile heat, and frequency of pulse; frequent discharge of a peculiarly foetid matter from the anus, varying in appearance, being sometimes pure mucus, or mucus mixed with blood; pure unmixed blood; pus, or a putrid sanies, proceeding from ulcerated or gangrenous parts; and often films of a membranous appearance, or small sebaceous masses, floating in a large quantity of liquid matter. Masses of indurated fæces [or scybalæ] are likewise sometimes passed by stool. Great emaciation and debility; quick and weak pulse; sense of burning heat, and intolerable bearing down of the parts; hiccup; and not unfrequently a fatal termination ensues. [In some cases a considerable portion of mucous membrane is evacuated by stool, which is a bad sign, though recovery may happen.]

CAUSES.—*Remote.*—A specific contagion. All those causes capable of inducing spasm and ulceration; much moisture, succeeding quickly to intense heat, [especially in autumn; excessive use of spirits;] fatigue; unwholesome and putrid food; noxious exhalations and vapours; vitiated intestinal secretions, as unhealthy bile, pancreatic and enteric juices.

Proximate.—Spasmodic constriction [or inflammation] and ulceration of the colon [or cæcum.]

[*Anatomical characters.*—The ileo-cæcal valve and vicinal parts are chiefly inflamed, sometimes there is partial or general colitis, the colon may be contracted as in chronic cases, greatly dilated, or completely mortified. In tropical dysentery, the whole of the abdominal viscera are found inflamed. The small intestines are much distended in some cases, and

the intestinal mucous membrane has been inflamed in its whole extent, except in the rectum.—*Cheyne of Dublin.*]

PROGNOSIS.—*Favourable.*—A gentle diaphoresis; the stools becoming yellow, and less frequent; the strength little impaired; sediment in the urine; the disease arising from common causes.

Unfavourable.—The disease having become habitual by long continuance; violent and distressing tenesmus and tormina; vomiting; hiccup; aphthæ; difficult deglutition; convulsions; cold extremities; delirium; cold and partial sweats; the tongue preternaturally red and dry; the pain suddenly ceasing; great prostration of strength; the feces extremely fetid; petechiæ; involuntary evacuations; intermitting pulse; the disease being complicated with others; as with affections of the liver, with intermittent fever; [encephalitis, arachnitis, gastro-enteritis, &c.]

TREATMENT.—*Indications.*—I. To remove the concomitant fever.

II. To evacuate the matter contained in the intestines.

III. To lessen irritation, and to restore the tone of the intestines.

To fulfil the first indication, the type of the fever must be ascertained.

If it is synocha, and the inflammatory diathesis prevails, blood-letting and the antiphlogistic regimen must be resorted to, but this will seldom be necessary, for the fever mostly assumes a putrid tendency, when the treatment proper for typhus will be required.

Many physicians have resorted to bleeding, [when there is pain in the abdomen on pressure,] not only with a view of reducing the fever, but of also unloading the mesenteric vessels of an excess of blood which generally prevails. [Leeches are sometimes necessary.] The extent, however, to which this remedy ought to be carried is a point of the utmost importance. “Nothing but the mitigation of pain and the extinction of fever, should form the limit to its employment.”—*O'Brien on Dysentery.*

[Blood-letting is seldom required in this country.]

If it assume the intermittent form, cinchona and tonics must be resorted to.

The second indication requires,

1. An emetic of ipecacuanha or antimonium tartarizatum.

[The free use of opium or Dover's powder to allay spasm; and then the evacuation of the bowels by means of castor-oil will generally remove this disease in a short time. The acetate of lead with opium is an effectual remedy, when there is intestinal hæmorrhage. See p. 100.]

2. Cathartics.—Of this class of medicines rhubarb has been very much preferred: the submuriate of mercury [with opium in small repeated doses] has also been highly approved; and where there is a tendency to inflammation, or the dejections manifest a total absence, or an inspissated, or ill-conditioned, state of bile, no other cathartic will be so effectual.

[R. Olei ricini ʒj;
Aquæ destillatæ ʒss;
Liquoris opii sedativi ℥ xx—xxv;
Fiat haustus quam primum capiendus.]

R. Olei lini,
Tincturæ rhei, āā f. ʒij;
Misce: fiat haustus semel vel bis quotidie sumendus.

R. Pulveris rhei ʒss;
Confectionis aromaticæ ʒj;
Tincturæ rhei f. ʒjss;
Aquæ menthæ piperitæ f. ʒjss;
Syrupi croci f. ʒj;

Fiat haustus.

The refrigerant saline cathartics alone, or conjoined with manna, have been long employed, especially by the army physicians, with the greatest advantage. See p. 75.

[Counter-irritation by means of tepid oil of turpentine, antimonial ointment, or a blister, will be useful in acute cases.]

The sulphas sodæ, and the phosphas sodæ, may be used in the same doses as the sulphate of magnesia.

A small dose of opium forms a useful addition to lessen their irritation.

The oleum ricini is a very excellent purge [when combined with the compound tincture of senna.]

Ipecacuanha, administered in such doses as not to prove emetic, but to act on the bowels, is also a very effectual cathartic in dysentery. [Mr. Twinning of Calcutta has lately used it in this manner with success. Dover's powder is more valuable.]

3. Large emollient clysters :—

R. Amyli ℥xij;
Aque ferventis f. ℥xvj;

Fiat enema bis terve die injiciendum.

R. Seminum lini usitatissimi ℥j;
Radici glycyrrhizæ contusi ℥j;
Aque destillatæ Oj;

Coque per quadrantem horæ, dein cola.

R. Hujus decocti Oss;
Tincturæ opii f. ℥j;

Fiat enema bis terve die administrandum.

Extract of opium in the quantity of two grains, introduced as a suppository into the rectum, is often retained when clysters will not remain.

Clysters of mutton broth, [beef tea, milk and water, arrow-root, and these in small quantities, or otherwise they will be speedily expelled.]

4. Emetic and purgative medicines combined.

R. Magnesiz sulphatis ℥j;
Antimonii tartarizati gr. j;
Infusi sennæ f. ℥vj;
Syrupi rosæ f. ℥ss;

Fiat mistura, cujus adhibeantur cochlearia tria magna pro re nata.

To fulfil the last indication, several remedies are used.

1. Mucilaginous demulcents; as, solutions of gum acacia and tragacanth, in milk; preparations of barley, arrow-root, linseed, salep, and the like: the wax emulsion :—

R. Cerae flavæ ℥ij;
 Saponis duri ℥j;
 Aquæ destillatæ f. ℥ss;
 Leni calore, post solutionem, adde—
 Aquæ destillatæ Ojss;
 Syrupi aurantii f. ℥ij;
 Ut fiat emulsio, cujus sit dosis cyathum parvum subinde.

R. Pulveris acaciæ ℥ij;
 Decocti hordei Oij;
 Succi limonis recentis f. ℥ij;
 Bibat æger pro potu ordinario.

2. Fomentations and embrocations to the abdomen.

A strong decoction of poppy-heads [or the anodyne embrocation.

Great relief will be produced by anodyne liniments applied over the painful part of the abdomen, such as warm camphorated oil with morphia. See pp. 180—184.]

3. Mucilaginous clysters with opium, or suppositories of opium:—

The starch clyster, with half a drachm of laudanum, every six or eight hours [and to be used cold when there is a sense of burning heat in the colon.

When there is flatulent distention of the abdomen, we should employ asafœtida, turpentine, and tobacco enmata, with the remedies described in p. 95.]

4. Diaphoretics; especially Dr. Dover's powder. See p. 179.

5. Opium; alone, or united with antimony, nitrate of potass, or tonics, according to the type of the fever.

[Dr. Cheyne, of Dublin, states that he administered four or five grains of opium to arrest the inflammation, and then exhibited balsam of copaiba with farinaceous food, with astonishing success.—*Dublin Hospital Reports*, v. iii.

Dr. Abercrombie has found the following medicines extremely beneficial: decoction of cusparia, nitric acid, and laudanum. The abdomen should be swathed with flannel, and the patient should wear woollen socks or stockings: when there is urgent diarrhœa, the French apply leeches round the anus.]

6. Antimonials: the vitrum antimonii ccratum, as recommended by Sir John Pringle. See pp. 69, 179, 183.

Tonics and astringents, at a more advanced period of the disease, when the frequency of the dejections seems rather to proceed from a weakened and relaxed state of the bowels than from any remains of malignancy; especially quinine, quassia, cusparia, cinchona, calumba, cascarilla, simarouba, verbascum, catechu, kino, nux vomica, arnica, hæmatoxylum, liquor calcis, bignonia capriolata, baked bread, nitrous acid with opium. See pp. 78, 85, 86.

The cinchona, cascarilla, and other tonics above mentioned, may be made into an infusion in like manner; and formed with the tinctures into draughts or mixtures.

R. Acidi nitrosi diluti ʒij;
Tincturæ opii f.ʒiiss;
Aquæ destillatæ f.ʒxiv;

Misce: capiat æger cochleare minimum quater in die,
ex cyatho parvo decocti hordci.

[This is an exceedingly valuable remedy.]

R. Extracti hæmatoxyli ʒj;
Misturæ cretæ f.ʒiv;
Tincturæ catechu f.ʒij;
Spiritus myristicæ f.ʒj;
[Syrupi zinziberis ʒj;]

Misce: cujus sit dosis cochlearia triâ magna tertiâ vel
quartâ quaque horâ.

There has been much difference in opinion with respect to the propriety of administering cinchona in dysentery. Its use is more particularly serviceable in those cases where the attendant fever assumes the remittent form, or where the disease is complicated with typhus, or with intermitting or remitting fevers. Sir John Pringle recommends the cinchona to be joined with serpentaria Virginiana, and Dr. Akenside gave it combined with a cathartic.

[In the valuable Clinical Reports published by Drs. Graves and Stokes, it is mentioned that strychnine in doses of one-twelfth of a grain in a pill, twice a day, was highly beneficial in the Meath Hospital, or County of Dublin Infirmary. They used it on the recommendation of Rummel, a German. —*Hufeland's Journ.*, June, 1825.]

The sulphate of copper, as first tried by Dr. Sutton of Greenwich, then by Dr. Granville, and afterwards by Dr. Elliotson, in diarrhœa, is a valuable astringent. The former combined it with opium; the latter has given it in the epidemic cholera of this year (1832), in the dose of half a grain every half hour.—Professor Elliotson's Clinical Lectures, *Lond. Med. and Surgical Journal*, 1832, v. ii. p. 523, No. 43, Nov. 24.]

On the continent, the *nux vomica*, *arnica montana*, *bigonia capriolata*, and sulphur, in large and frequent doses, are the favourite remedies.

Dr. Thomas, during a residence in the West Indies, was in the habit of recommending a strong decoction of logwood, with the bark of the pomegranate and cherry tree, as an astringent drink, from which his patients seldom failed to experience a good effect.

The means above mentioned will be found totally inadequate to the cure of chronic dysentery, if a dusky sallow hue of countenance, tenderness upon pressure in the region of the liver, and a clayey appearance of what fæces happen occasionally to be voided, manifest the presence of a diseased or obstructed state of the liver. In such cases *mercury* [with the external use of iodine] is the only remedy; and this should be pushed to such an extent, as to keep up a gentle affection of the mouth until the symptoms begin to be mitigated.

Every kind of food which tends to putridity should be avoided, also spirituous liquors; and the strength should be supported by light preparations of barley, rice, sago, Indian arrow-root, flour, panada, and gelatinous broth.

[In dysentery of warm climates, Dr. James Johnson and Sir G. Ballingall opposed the use, or rather the abuse, of mercury; in some cases, an immense quantity of calomel, 974 grains, more than sixteen drachms, were exhibited unsuccessfully. Mercurial salivation, according to Dr. Cheyne, of Dublin, and Dr. Mackintosh, is not a cure for the disease. In chronic dysentery we should employ sulphate of copper and acetate of lead with opium, as well as sulphate of zinc. Four ounces of mutton suet boiled in milk and strained, is an old and valuable remedy. It may be used twice a day.]

CLASS II.
NEUROSES;
OR,
NERVOUS DISEASES.

CHARACTER.

Preternatural affection of sense or motion, without any idiopathic fever, or primary local affection.

ORDERS:

COMATA.	SOPOROSE AFFECTIONS.
ADYNAMIÆ.	ADYNAMIAL AFFECTIONS.
SPASMI.	SPASMODIC DISEASES.
VESANIÆ.	DISEASES FROM IMPAIRED JUDGMENT.

ORDER I.

COMATA.

CHARACTER.

Diminution of voluntary motion, with sleep, or a privation of sense.

GENERA.

APOPLEXIA.	Apoplexy.
PARALYSIS.	Palsy.

APOPLEXIA.—APOPLEXY.

SPECIES.—1. *Apoplexia sanguinea*; with signs of universal plethora, and chiefly of the head.

2. *Apoplexia serosa*; occurring for the most part in the leueophlegmatic bodies of old people.

3. *Apoplexia hydrocephalica*; coming on by degrees; affect-

ing infants and children, first with lassitude, a degree of fever and headache; afterwards with slow pulse, dilatation of the pupil, and drowsiness.

4. *Apoplexia atrabilaria*; in a person of a melancholic temperament.

5. *Apoplexia traumatica*; from external violence applied to the head.

6. *Apoplexia venenata*; from sedatives externally or internally applied.

7. *Apoplexia mentalis*; from affections of the mind.

8. *Apoplexia cataleptica*; the muscles obeying the motion of the joints when influenced by force externally applied.

9. *Apoplexia suffocata*; from suffocation by something external.

Of these species, the three first only require a particular description; the others are known by their several causes, and their treatment will be similar to that of the sanguineous or serous species; after the removal of the exciting causes, according as the symptoms evince the character of the one or the other. [The real pathology of this disease is described in its anatomical characters.]

SYMPTOMS.—*Of the sanguineous.*—Abolition of all the powers of sense and motion, accompanied with noisy or stertorous breathing; flushed, and sometimes livid countenance; prominence and immobility of the eye, with dilated pupil; foaming at the mouth; grinding of the teeth; often a resolution of the sphincter muscles; the strength of circulation remaining unimpaired. The attack is sometimes sudden, at others it is preceded by various symptoms denoting an affection of the brain; such as giddiness, headache, hæmorrhage from the nose, interruption of sight or of hearing, false associations of ideas, faltering in speech, loss of memory, drowsiness, numbness of the extremities. It often terminates in paralysis, or the patient is seized with vomiting, and recovers after a profuse sweat.

Of the serous.—The attack of serous apoplexy is, in general, more gradual than that of the sanguineous; and is preceded by languor, debility, disposition to sleep, and often

partial loss of sense. In the fit, the pulse is weak, the face pale, and there is a diminution of natural heat. [When paralysis follows, the muscles of the affected side of the face are relaxed and the opposite ones are natural, which gives the appearance of the face being drawn towards the sound side.]

CAUSES.—Of the sanguineous.

Predisposing.—A certain age: from the fiftieth to the sixtieth year [it occurs from the third year to decrepit old age—*Serres*]; great obesity, especially if occurring in persons having a short neck and large head; indulgence in the luxuries of the table; suppression of usual evacuations; intense study; sedentary life; plethora, however induced; [hypertrophy of the left ventricle of the heart; metastasis of gout or rheumatism; and repression or non-appearance of exanthematous eruptions, as variola, rubeola, or scarlatina.]

Exciting.—Violent exercise; passions of the mind; sudden exposure to cold; intense heat; long stooping; derangement of the stomach, or intestinal canal; long-continued inspiration, as during parturition; excess in venery; overloading the stomach; the application of the fumes of certain narcotic and metallic substances, such as opium, alcohol, charcoal, mephitic airs, hot bath, &c.

Proximate.—Pressure upon the brain by extravasated blood, [or serum,] distended vessels, tumour, or other cause. In many instances dissection discovers no obvious cause, and then the proximate is, most probably, an atonic state of the brain. [This is the nervous apoplexy of writers.]

Of the serous.

Predisposing.—The leucophlegmatic constitution. All those causes inducing a debilitated state of the body; such as depressing passions of the mind, much study, watching, poor living, &c.

Proximate.—The pressure of effused serum upon the brain.

PROGNOSIS.—Favourable.—The senses little impaired; the function of respiration not much affected; hæmorrhage from the nose or hæmorrhoidal vessels; diarrhœa. The sanguineous

is more dangerous than the serous; the latter has often been removed by supervening fever.

Unfavourable.—Protracted beyond the third day; the pulse becoming quick and hard; febrile heat; redness of the eyes; dribbling of saliva from the mouth; deglutition continuing impeded; cold extremities; cold and clammy sweats.

[*Anatomical characters.*—Effusion of blood in the hemisphere opposite to the affected side. The fluid is effused in several cavities, or in one mass. It forms a brown pulpy clot. When recent, the blood is partly fluid and coagulated, and may be separated by ablution. The brain is lacerated about the coagulum, and of a red colour. After some time, the parts surrounding the coagulum or clot become of a yellowish colour, the latter is absorbed, the walls of the cavity approximate or cohere, or are lined by a false membrane. The parts of the brain most commonly affected are, the corpora striata, the optic thalami, and one or both ventricles. In cases of hæmorrhage of the substance of the brain, the vicinal parts, when incised, present a number of red dots, which re-appear after sponging. The vessels of the pia mater and sinuses of the dura mater are often gorged with blood. In serous apoplexy, we find more or less aqueous-like fluid, and in the nervous species, no appreciable lesion. Clots, and copious effusion, do not cause apoplexy, convulsions, or paralysis (*Ver-salius, Wepfer, Serres*). Serres cites numerous cases to prove that effusions are the effect, and not the cause, of apoplexy. In simple apoplexy, the membranes of the brain are affected in various degrees; there are serous collections in the ventricles or convolutions. Whereas, when the disease is followed by paralysis, there are no effusions, no affection of the membranes, but the substance of the brain is materially altered in structure, it is torn, and a vessel is lacerated, which was proved by filling the carotids with fine injection. He divides the disease into meningeal and cerebral apoplexy; the first attacks youths after the age of fifteen, or men after sixty, and most frequently women before the last period. Me-

ningeal apoplexy is almost always slow, and has preeursory symptoms. He states there are five species:—1. meningeal apoplexy without effusion; 2. with effusion of simple serosity; 3. with sero-sanguineous effusion; 4. with arterial rupture, or aneurismal dilatation; 5. with venous rupture. The patient falls upon the side which will afterwards be struck with apoplexy, a fact of great importance in the treatment. There are five species of cerebral apoplexy:—1. with hemiplegia; 2. with paralysis of one arm; 3. with paralysis of one leg; 4. with double hemiplegia; 5. with complete paralysis from a single attack. In nearly 3000 cases, the lobe of the brain opposite to the palsied side was disorganized. When the whole body is paralysed, and death rapidly takes place, the extravasation will be in the pons varolii or tuber annulare.]

TREATMENT.—*Indications*.—I. To remove the cause producing pressure upon the brain. Or,

II. To rouse the energy of the brain.

In the sanguineous.

1. By bleeding largely and frequently from the jugular vein and temporal artery, [or from both arms simultaneously. The paleness of the countenance must not prevent us from bleeding when the pulse is strong.]

2. The application of leeches and cupping-glasses.

[Repeated depletion, cold to the head, cupping or leeching the base of the cranium, sinapisms or hot turpentine to the legs, with drastic purgatives, or eroton oil applied to the tongue, must be rapidly employed.

When apoplexy arises from suppression of the menstrual or hæmorrhoidal flux, we should apply leeches to the vulva or about the anus. When there is profound coma or collapse, we should apply irritating liniments to the legs, thighs, neck, face; and if these fail, and life is nearly extinct, we should pour boiling water over the extremities, as first advised by the Germans, or apply nitric acid to the nucha; stimulants in such cases have produced re-action, and when this happens, depletion may be necessary. The hot air bath, or exhausted air bath, proposed by Dr. Murray of Dublin (*Lond.*

Med. and Surg. Jour., 1832), will be exceedingly valuable in these and all cases of profound collapse.]

3. Blisters, or mustard cataplasms, first to the back, afterwards to the head; then to the extremities.

4. Drastic purges.

R. Vini aloes f. $\bar{3}$ ss;
Tincturæ jalapæ f. $\bar{3}$ ij;
Infusi sennæ f. $\bar{3}$ j;

Fiat haustus purgans.

R. Cambogiæ gr. v;
Tincturæ sennæ compositæ f. $\bar{3}$ j;
——— jalapæ f. $\bar{3}$ j;
Infusi sennæ f. $\bar{3}$ j;

Fiat haustus catharticus.

The oleum crotonis, lately introduced from the east, can often be given in this disease, when the patient cannot swallow the ordinary doses of other medicines; for two drops put on the tongue will purge briskly. It is an excellent purgative, inasmuch as it seldom fails: one, two, or three drops is the usual dose. [Aloes, colocynth, scammony, camboe, should be used in full doses.]

5. Sudorifics of antimonials and acetate of ammonia. See pp. 69, 70.

In many instances the patient cannot swallow during the fit of this disease: in such cases great care is required lest any thing get into the glottis, and suffocate; and when this is likely to happen, all attempts should be abandoned, and external means trusted to.

6. If the disease takes place soon after a full meal, an emetic [or irritating the fauces should be employed.]

7. Erect position of the body.

Should this plan prove ineffectual, recourse should be had to the stimulants recommended for the serous apoplexy, and for paralysis.

In the serous.

1. By emetics of ipecaeuanha and tartarized antimony. See p. 75.

2. By blisters applied to the head. (?) See Cerebritis, p. 131.

3. Sinapisms, [ammoniated oil, or hot turpentine] to the extremities.

5. Diffusible stimulants of ammonia, eastor, asafoetida, valerian. [See Typhus Gravior, p. 91.]

6. Electricity; the electric spark passed through the head?

7. Mercury, rubbed on the extremities.

[In this disease, cerebral congestion, last stage of typhus or coma, we must examine the hypogastric region daily, and perform catheterism if necessary. When convalescence commences, we should regulate the digestive system; employ counter-irritation on the neck, insert an issue or seton in that situation, or in the middle of the arm, or on the external surface of the knee. When paralysis ceases in one limb, and seizes on another, we must resort to general and local bleeding, counter-irritation, purgation, &c.]

When apoplexy supervenes after retrocession of gout or by metastasis of rheumatism, we should irritate the site of the latter disease by sinapisms, blisters, warm turpentine, or antimonial ointment with croton oil: depletion in such cases is generally injurious.

When paralysis follows apoplexy, we should cause irritation over the origins of the affected nerves; and galvanism or electricity are often beneficial in such cases. The editor has relieved numerous cases by local bleeding over the origins of the affected nerves, and then by counter-action or counter-irritation. There is no use in galvanizing or electrifying the limb, unless at the origin of its nerves.

Strychnine is useful when there is no cerebral congestion, pressure on the brain or spinal marrow, or constipation. The eighth of a grain twice a day is the dose at first, and two grains the maximum dose.

When paralysis is attended by neuralgia, we should employ carbonate of iron in large doses. When called to an apoplectic patient, we should loosen the neckcloth, open a vein in the arm in the semi-erect position, pour cold water in a continued

stream on the head, sec p. 98, allow free ventilation, open the bowels by eroton oil applied to the tongue or by acrid cnemata. If the pulse does not rise on the flow of blood, we should bind up the arm, lest fatal eollapse supervene.

As apoplexy depends on a determination of blood to the head, and generally on a plethoric habit, we should advise the total abstinence from animal food and from all ardent or fermented liquors, spirits, wines, porter, ale, &c. Arrow-root, sago, rice, tapioca, barley, stale bread, oatmeal, potatoes, turnips, and parsneps are the most easily digested of the vegetable aliments. Ripe fruits may be allowed. Cabbage, beans, cauliflowers, salads, radishes, onions; cucumbers are difficult of digestion and ought to be avoided. Bread or biseuits and milk are the best articles of diet. If animal food be used, it should be in very small quantity. Late suppers must be avoided. Exercise in the open air is of great importance. The patient should wear nothing tight about the neck or waist. Cupping the neck occasionally is a valuable prophylactic.]

Of the Hydrocephalic Species.

HYDROCEPHALUS.—WATER IN THE HEAD.

SYMPTOMS.—Languor, inactivity, loss of appetite, nausea, vomiting, parched tongue, hot dry skin, flushing of the face, and other symptoms of pyrexia; pain over the eyes; great sensibility to light; suffused redness of the eyes; the pupils are contracted; the pain in the head is now extremely acute; it comes on at intervals, and occasions the sufferer to utter piercing screams, at the same time compressing the forehead with his hand; disturbed sleep; extreme restlessness; flushed countenance; costiveness.

In a short time the pupils of the eyes begin to dilate; strabismus takes place; the vomiting and pain in the head become more violent, especially in the evening; at length the pain diminishes, and sleepiness succeeds a constant state of watch-

ing; the pulse, before increased in quickness, is now preternaturally slow and often intermitting; the strabismus increases; the pupils become more dilated, and cease to contract on their being exposed to light; double vision or complete loss of sight, with lethargic torpor, succeed.

After a shorter or longer continuance of the second stage, the pulse again returns to a febrile state, and becomes so extremely small and rapid, as scarcely to be numbered; the eyes are now inflamed; extreme difficulty of breathing; stertor; the evacuations become involuntary; maculæ sometimes appear about the joints, and in different parts of the body; and at length the patient expires in dreadful convulsions.

CAUSES.—The disease is almost peculiar to children, and more frequently attacks the scrofulous; it seems to originate in a weakened state of the organ itself.

The proximate cause in some cases appears to be inflammation, which terminates by an effusion of watery fluid.—[See Cerebritis and Meningitis, p. 132.]

In other cases the proximate cause would seem to be the same as that of the other species of dropsy.—See Hydrocephalus in the class *Cachexiæ*; order *Intumescentiæ*.

DIAGNOSIS.—The pathognomonic symptoms are the excruciating pain in the head, vomiting, impatience of light; followed by strabismus, dilated pupil, and profound stupor. The pulse at first preternaturally quick, afterwards becoming inordinately slow or intermitting.

PROGNOSIS.—Will ever be unfavourable, more especially where the coma is great, with total loss of sight, and weak intermitting pulse; the head greatly enlarged, apoplectic stertor, difficult respiration, and involuntary evacuations.

TREATMENT.—*Indications*.—I. To lessen inflammation in the inflammatory stage.

II. To promote the absorption of the fluid, when effusion has taken place.

The inflammation is subdued by,

1. Bleeding; the application of leeches to the temples or neck, by opening the temporal artery, or the jugular vein, see p. 129.

2. Cathartics ; of jalap, submuriate of mercury, or soluble tartar.

R. Gummi-resinæ scammoniae gr. iv;
Hydrargyri submuriatis gr. iij;
Sacchari purificati gr. v;

Fiat pulvis catharticus ex pauxillo mellis sumendus.

Half a drop or a drop of the oleum erotonis is a sure purge, which may be disguised and given to children when other medicines are refused.

R. Hydrargyri submuriatis gr. ij;
Pulveris antimonialis gr. j;

Fiat pulvis omni bitorio adhibendus ex quovis vehiculo crasso.

3. Diaphoretics ; especially antimonials.

4. Nitrate of potass in large doses with digitalis.

R. Potassæ nitratis gr. vj;
Tincturæ digitalis m v—x;
Liquoris ammoniæ acetatis f.3ij;
Aquæ destillatæ f.3v;
Syrupi croci f.3j;

Fiat haustus infanti æt. 4 adhibendus tertiâ quaque horâ.

5. Blisters, and cold applications to the head ; cloths wetted with cold water, or vinegar and water, which may be made very cold by ice, or solutions of muriate of ammonia and nitrate of potass, and so applied as not to interfere with blistering.—See p. 131.

The second indication requires,

1. Mercury ; mercurial friction [to the nape of the neck or angles of the jaws], submuriate of mercury taken internally.

2. Digitalis ; either alone, or united with the submuriate or solution of the oxymuriate of mercury and squills.

3. Tonics ; the ferrum ammoniacale, sulphas ferri : or those recommended for the cure of anasarea, but I have never seen them indicated in acute hydrocephalus.

PARALYSIS.—PALSY.

SPECIES.—1. *Paralysis partialis* ; or paralysis of a certain muscle, or set of muscles, only.

2. *Paralysis hemiplegica* ; or total paralysis of one side of the body.

3. *Paralysis paraplegica* ; or paralysis of one half of the body, taken transversely.

4. *Paralysis venenata* ; from poisons.

SYMPTOMS.—An abolition of voluntary motion, or sensation, or both, in certain parts of the body only ; often with sleep, and slow and soft pulse ; preceded, when not the consequence of apoplexy, by universal torpor ; vertigo ; sense of weight and pain in the head ; loss of memory ; sense of creeping, of numbness, of pricking, sometimes of heat, in the part afterwards to be paralysed.

CAUSES.—Compression of the brain, from whatever cause ; impaired nervous energy ; either in the part itself, or in its source, the sensorium commune ; determination of fluids to the head, by the suppression of usual evacuations ; certain poisons ; of which the most frequent is lead ; compression of the nerves in their course ; apoplexy, and all the causes inducing it ; see Apoplexy ; irritation of the primæ viæ ; rheumatism.

DIAGNOSIS.—*From apoplexy*.—It is distinguished from apoplexy by the loss of sense and motion being partial only ; by the absence of stertor ; by the sunk pulse ; and other symptoms above mentioned. See pp. 125—127.

PROGNOSIS.—*Favourable*.—Sense of pain and itching in the paralyzed parts ; returning sensation and motion. A fever and diarrhœa have restored sensation to parts paralyzed from causes acting upon the nerves only. Youth, and previous strength of constitution.

Unfavourable.—The parts being deprived of both motion and sensation ; gradually wasting, and becoming dry and withered ; convulsions ; the paralysis of the left side is more dangerous than a similar affection of the right ; and of the upper extremity than of the lower. When the consequence of apoplexy, the disease usually proves difficult of cure.

TREATMENT.—*Indication*.—To remove causes that are obvious, and thereby to restore sensation and motion to the paralyzed parts.

If the accession of the fit be sudden, the patient of a plethoric habit, and the head much affected, bleeding from the jugular vein, and the treatment recommended for apoplexy.

If the disease occur in a debilitated constitution, in a patient advanced in age, and where the head is little affected, the use of powerful stimuli will be proper; as, mustard-seed, horse-radish, volatile alkaline salts, or spirits, guaiacum, electricity, æther, arnica flowers, rhus radicans, and toxicodendron. [Strychnine, when there is no cerebral affection or constipation.]

One tea-spoonful of mustard-seed two or three times a day, whole, in a little dill or peppermint-water; or the mustard as prepared for the table.

R. Radicis armoraciæ contusæ ʒij;

Seminis sinapis,

Radicis valerianæ, āā ʒij;

—— rhei incisæ ʒss;

Infunde in vini Hispanici Oij;

Sæpe agitetur, et coletur usûs tempore: cochlearia duo magna quartâ quaque horâ sumenda.

R. Spiritûs ammoniæ compositi f. ʒss;

Tincturæ cardamomi compositi f. ʒij;

Aquæ pimentæ f. ʒxij;

Syrupi f. ʒj;

Fiat haustus sextis horis capiendus.

R. Spiritûs armoraciæ compositi f. ʒss;

—— ammoniæ fœtidæ ℥ xv;

Tincturæ valerianæ ammoniatæ f. ʒss;

Aquæ pimentæ f. ʒix;

Syrupi f. ʒj;

Fiat haustus quartâ quaque horâ sumendus.

R. Ammoniæ subcarbonatis gr. vj;

Spiritûs ætheris sulphurici compositi f. ʒj;

Misturæ camphoræ f. ʒxiv;

Syrupi zingiberis f. ʒj;

Fiat haustus quartis horis adhibendus.

R. Guaiaci pulverisati gr. x;

Tincturæ guaiaci ammoniatæ f. ʒj;

Pulveris acaciæ ʒij;

Syrupi croci f. ʒjss;

Aquæ pimentæ f. ʒxij;

Fiat haustus sextis horis capiendus.

R. Floris arnicæ montanæ ʒj ;
 Aquæ ferventis f. ʒx ;
 Macera per horam in vase clauso et cola :

R. Colati liquoris f. ʒxij ;
 Tincturæ zingiberis f. ʒij ;
 Syrupi ejusdem f. ʒj ;
 Fiat haustus quartis horis sumendus.

The mountain arnica, though so much praised by continental writers, is very seldom used in this country.

The external application of stimulating liniments : as the linimentum ammoniæ fortius, the linimentum carbonatis ammoniæ, the linimentum camphoræ compositum, and the linimentum saponis compositum. Also,

R. Pulveris seminis sinapis ʒj ;
 Acidi acetici f. ʒss ;
 Linimenti saponis compositi f. ʒjss ;
 Fiat embrocatio.

R. Tincturæ cantharidis,
 Linimenti saponis compositi, aa f. ʒj ;
 Fiat linimentum.

R. Tincturæ cantharidis f. ʒj ;
 Olei terebinthinæ rectificati f. ʒss ;
 Linimenti camphoræ f. ʒss ;
 Fiat embrocatio.

R. Olei cajeputi f. ʒjss ;
 Liquoris ammoniæ carbonatis f. ʒss ;
 Fiat embrocatio.

R. Camphoræ ʒjss ;
 Olei terebinthinæ rectificati f. ʒjss ;
 Solve pro embrocatione.

R. Liquoris ammoniæ carbonatis f. ʒss ;
 Linimenti saponis compositi f. ʒjss ;
 Fiat linimentum.

R. Liquoris potassæ subcarbonatis f. ʒss ;
 Linimenti saponis compositi ʒjss ;
 Misce pro embrocatione.

The frequent and continued use of the flesh-brush.
 Blisters over the origins or in the direction of the nerves.
 Warm fomentations.

Urtication, or the irritating the limb with nettles.

Regular exercise.

The warm and salt-water baths; champooing; vapour baths, simple and medicated.

Bath waters.

The palsy arising from lead requires the internal and external use of mercury in addition to the other means.

R. Hydrargyri submuriatis gr. $\frac{1}{2}$;
Sulphureti antimonii præcipitati gr. $\frac{1}{2}$;
Confectionis opii q. s.;

Fiat pilula ter in die sumenda.

R. Pilulæ hydrargyri gr. j;
Guaiaci gummi-resinæ gr. viij;
Mucilaginis acaciæ q. s.;

Fiant pilulæ duæ ter in die sumendæ.

R. Linimenti hydrargyri \mathfrak{z}_{ss} ;
Olei terebinthinæ rectificati f. \mathfrak{z}_{ss} ;
Linimenti camphoræ f. \mathfrak{z}_{j} ;

Fiat embrocatio, ejus illinatur cochleare medium in partes affectas bis quotidie.

[When palsy succeeds apoplexy, we should employ depletion, purgation, and the antiphlogistic regimen, and then exhibit strychnine in the doses of one-eighth of a grain twice a day, increasing the quantity to the sixth, fourth, or even half a grain. If any unpleasant symptom arises, the medicine must be immediately omitted. It produces convulsions, twitchings in the paralytic limbs at first, and finally restores their action. It was administered by that able physician, Dr. J. L. Bardsley, of Manchester, in thirty-five cases, with success. In some of these it affected the head so much, that it was necessary to discontinue it for some days, and employ purgation and depletion. It was again resumed, in small doses, with ultimate success.—*Bardsley's Hospital Reports*, 1830.

Sulphur has been lately recommended in paralysis from lead and colica pictonum.]

ORDER II.

ADYNAMIÆ.

CHARACTER.

A diminution of the involuntary motion, either vital or natural.

GENERA.

SYNCOPE,	.	.	Fainting.
DYSPEPSIA,	.	.	Indigestion.
HYPOCHONDRIASIS,	.	.	Hypochondriacism.
CHLOROSIS.	.	.	Retention of the Menses.

SYNCOPE.—FAINTING.

SPECIES.—1. *Syncope accidentalis*; originating from an evident cause.

2. *Syncope cardiaca*; often returning without apparent cause, or vehement palpitation of the heart at intervals.

3. *Syncope anginosa*; attended with stricture on the chest, and pain striking up to the shoulders and down the arms.

SYMPTOMS.—Remarkable anxiety about the heart, followed by a sudden deprivation of all the animal and vital powers and actions, of pulse, of sense and motion. Sometimes the loss of sense is incomplete (*leipothymia*), when the patient turns cold and pale, yet the pulse continues to beat, or rather to tremble, and respiration is just perceptible; at others (*asphyxia*) not the smallest sign of life can be perceived; the face has a death-like paleness, the extremities are cold, the eyes shut, the mouth sometimes shut and sometimes open, the limbs flaccid, and the strength quite gone. A recovery is announced by deep and heavy sighs; and is frequently accompanied with vomiting. It sometimes terminates in epilepsy and convulsions.

CAUSES.—*Predisposing*.—Nervous irritability and delicacy of constitution; debility, however induced; profuse evacu-

ations, especially of blood; violent passions of the mind; surfeits; excessive pain; organic diseases of the heart or large vessels.

Proximate.—Diminished action of the heart and arteries, or their total quiescence.

TREATMENT.—*Indications.*—I. During the paroxysm, to excite the return of the action of the heart and arteries.

11. In the interval, to prevent the recurrence of the disease.

The first indication requires,

1. Bleeding, when the disease has arisen from any other than a debilitating cause; in that instance evacuations would be prejudicial.

2. Emetics, if the patient be capable of swallowing; more especially indicated in syncope arising from any cause of saburra. Vomiting may be sometimes excited by tickling the fauces with a feather dipped in some stimulant liquor.

3. Acriid stimuli applied to the nose, and taken internally, as soon as the capacity of swallowing returns; such as the carbonate of ammonia, liquor cornu cervi, and the like.

When syncope is induced by large evacuations of blood, diffusive stimulants are to be used cautiously [but freely].

To fulfil the second indication,

1. The causes must be removed by which it was induced. If debility, by tonics; as bark, steel, &c.; antispasmodics.

2. Other remedies, adapted to the several causes above enumerated.

When fainting fits are produced by organical affections of the heart, or neighbouring viscera, all that can be done is to palliate symptoms of fainting, and endeavour to remove the primary disease. [The patient should be placed in the horizontal position during the paroxysm.]

OF SYNCOPE ANGINOSA; OR, ANGINA PECTORIS.

SYMPTOMS.—Upon exercise, especially when walking up an ascent, and after a full meal, a sudden and violent pain across the chest, extending down the arm as far as the in-

sertion of the deltoid muscle, accompanied with a sense of stricture, so acute as to threaten immediate destruction. The patient is instantly obliged to stand still, and the moment he does so all the symptoms vanish. After repeated attacks of the disease, it is excited by slighter causes, and the paroxysms are more violent. The pulse sinks, and becomes weak and irregular; the countenance pale; cold sweats; constant cough; expectoration of viscid mucus; the patient is, at times, incapable of lying down; at length, a fit more violent than usual puts an end to his miserable existence.

CAUSES.—Ossification of the coronary arteries of the heart; ossification of the valves of the heart; morbid accumulation of fat; incapacity of action in the heart, excited by every thing which hurries the circulation, and accelerates the passage of the blood to the depraved organ, as violent exertion, certain passions of the mind, sneezing, coughing, straining at stool, &c. [Dr. Uwins well observes, that various diseases of the heart may produce the symptoms of this disease.—*Compendium of Practice of Physic*. See also Copland's elaborate *Dictionary of Practical Medicine*, 1832. It is most common to gouty, rheumatic, studious, and sedentary persons, and generally occurs after the age of fifty, though Dr. Copland has seen it at the age of thirty-four.]

TREATMENT.—*Indications*.—I. In the paroxysm, to alleviate the distressing symptoms above described.

II. In the interval, to prevent the return of the disease.

The symptoms are sometimes relieved,

1. By bleeding. Dr. Parry recommends the patient to be laid in a recumbent position, and a small quantity only of blood drawn away.

2. By antispasmodics: spiritus ætheris sulphurici compositus; opium.

R. Spiritus ætheris sulphurici compositi f. ʒss;
Misturæ camphoræ f. ʒvjss;
Syrupi zingiberis f. ʒss;

Misce: cujus capiat æger cochlearia duo magna bis in horas urgenti dolore.

R. Spiritus ætheris sulphurici compositi f.3ij;
 ——— ammoniæ succinati f.3j;

Misturæ camphoræ f.3vj;

Syrupii aurantii f.3ss;

Misce: cujus adhibeantur cochlearia duo magna omni hora in dolore.

To both of these mixtures 3j of the [liquor opii sedativus] may be added, as the combination of opium with æther has been found serviceable. [Colchicum, hydrocyanic acid, and digitalis, are sometimes used with advantage.]

3. Emetics were administered by Dr. Percival.

4. Carminatives; as eordial confection, eardamoms, ginger, pepper, and the like.

5. Blisters [antimonial ointment with croton oil, or hot turpentine fomentation over the cardiac region].

The return of the paroxysm is to be prevented,

1. By removing all the exciting causes.

2. Diminishing plethora by abstemious living, and vegetable diet.

3. Abstinence from every thing heating; as spices, wines, and all fermented liquors.

4. Guarding against vehement emotions of the mind.

Issues; setons; blisters to the chest; nitrate of mercury; arseniate of potass and sulphate of zinc, in some cases, are said to have been useful. [All the symptoms of this disease may be caused by dyspepsia, and cease when the latter affection is removed. See Dr. Ryan's Essay in the *Medical and Physical Journal*, 1824. Jurine considers it a nervous affection; and he, Laennec, Deportes, and Chapman, ascribe it to neuralgia of the cardiac and pulmonary nerves.]

DYSPEPSIA.—INDIGESTION.

SYMPTOMS.—Want of appetite; distention of the stomach; flatulent eructations; general debility, languor, and aversion to motion; dejection of spirits; spasmodic pains in the region of the stomach; nausea; acid eructations; sometimes

rumination; sense of oppression and sinking after eating; heart-burn; irregularity of appetite; either obstinate costiveness, or diarrhoea; small slow pulse, quickened upon the slightest exertion; palpitation; flushed countenance after a meal; the tongue dry, and generally white in the morning; pale urine, [depositing a red (lithic acid) or a white sediment (the phosphates), with an oily pellicle on the surface]; cold extremities; sallow countenance; various affections of the senses; depraved vision, &c.; pain in the head and breast; dry skin; sometimes, however, profuse diaphoresis or salivation; disturbed sleep, frightful dreams, hectic fever, symptoms of hypochondriasis.

CAUSES.—Every thing which debilitates the system in general, or the stomach in particular; narcotics, as opium taken in immoderate quantities, spirituous liquors, tea, tobacco, &c.; the frequent use of warm relaxing liquids; sedentary life; imperfect mastication; certain depressing affections of the mind; too flatulent or farinaceous a diet; excessive evacuations; the too powerful operation of emetics and purgatives; diseases of the liver; hysteria; hypochondriasis; aliment taken into the stomach in too large quantities; excess in venery; exposure to moist and cold air; deficiency in the secretion of bile, saliva, or gastric juice.

DIAGNOSIS. — *From hypochondriasis.* — See Hypochondriasis.

TREATMENT.—*Indications.*—I. To remove those causes which are obvious and continue to operate.

II. To palliate urgent symptoms.

III. To restore the tone of the stomach, and prevent the recurrence of the disease.

The first and most important step to be taken in the cure of dyspepsia is to point out to the patient the indispensable necessity of removing such habits and pursuits as may have tended to give rise to the disease, and continue to aggravate it: until this has been effected, remedies will be found of no avail.

The cure will then consist,

1. In the occasional exhibition of a gentle emetic, or what is preferable, an aperient, to remove the erudities from the

stomach and bowels, indicated by nausea, sense of weight and oppression, and eructations of imperfectly digested food, and costiveness.

2. In correcting morbid acidity, by alkalis and absorbents alone, or united with laxatives.

R. Liquoris potassæ f. ʒij;
 ———— calcis f. ʒvjss;
 [Magnesiae calcinatæ ʒj;]

Misce: cujus capiat æger cochleare magnum bis in die ex poculo jusculi bovini.

R. Misturæ cretæ f. ʒjss;
 Spiritus myristicæ f. ʒij;
 Syrupi zingiberis f. ʒj;

Fiat haustus mane seroque sumendus.

R. Potassæ subcarbonatis ʒjss;
 Myrrhæ contusæ ʒj;
 Aloes socotrinæ ʒjss;
 Crocī ʒss;
 Aquæ destillatæ Oj;

Coque ad ʒxij; et liquori colato adde—
 Tincturæ cardamomi compositæ ʒiv;
 Syrupi zingiberis f. ʒjss;

Sit dosis cochlearia duo magne bis die.

[When the fluid rejected by the stomach is saline, we should employ the mineral acids: the sulphuric aromatic acid is an excellent remedy in such cases; and we are indebted to Dr. James Johnson for much excellent information on the management of this disease. See his Essay on Morbid Sensibility of the Stomach, &c.]

Very similar to this is the decoctum aloes compositum; two spoonfuls of which may be taken once or twice daily.

R. Sodæ subcarbonatis exsiccatae ʒj;
 Saponis duri ʒij;
 Pulveris rhei q. s.;

Fiat massa in pilulas xxxvj. vel mediocres dividenda, quarum capiat æger tres bis terve die.

R. Sodæ subcarbonatis exsiccatae,
 Extracti anthemidis, āā ʒj;
 Pulveris rhei q. s.;

Fiat massa in pilulas xxxvj. distribuenda: sit dosis duæ vel tres bis terve die.

3. In obviating costiveness by warm and gentle laxatives, and particularly by the exhibition of small doses of the oxides of mercury and the submuriate, when bile is not secreted in sufficient quantity to procure healthy excretions, or when its quality is altered so as not sufficiently to stimulate the bowels. [The compound calomel pill or small doses of blue pill are often beneficial.]

R. Pilulæ hydrargyri gr. iv;
Fiat pilula omni nocte capienda.

R. Magnesiae sulphatis ʒj;
Infusi rosæ f. ʒx;
Tincturæ aurantii f. ʒj;
Fiat haustus mane sequente sumendus.

R. Hydrargyri submuriatis,
Sulphureti antimonii præcipitati, āā gr. ss;
Confectionis rosæ caninæ q. s.;
Fiat pilula omni nocte sumendus.

R. Radicis rhabbarbari contusæ ʒiij;
Sodæ carbonatis ʒjss;
Corticis cinnamomi contusi ʒj;
Aquæ ferventis f. ʒx;
Soda et rheo prius ritè contritis, in vase idoneo macera,
et liquorem cola, dein adde—
Tincturæ aurantii f. ʒj;
Sumantur cochlearia tria singulis auroris.

R. Extracti aloes scrotrinae,
Pulveris rhei, āā ʒjss;
Saponis duri ʒss;
Syrupi zingiberis q. s.;
Fiat massa in pilulas L. dividenda, quarum sumat duas
vel tres pro re nata.

R. Pulveris rhabbarbari gr. xij;
Hydrargyri submuriatis gr. j;
Pulveris zingiberis gr. v;
Fiat pulvis aperiens.

R. Extracti colocynthidis compositi ʒj;
Pilulæ galbani compositæ ʒij;
[Olei menthæ piperitæ m iv;]
Fiant pilulæ xvij. quarum sumat tres pro re nata.

R. Pilulæ aloes cum myrrha 3j;
Extracti gentianæ 3ss;

Fiant pilulæ xvij. quarum sumat tres pro re nata.

R. Pulveris aloes compositi 3j;
Extracti taraxaci 3jss;

Fiant pilulæ xxx. quarum sumat tres pro dosi.

R. Pulveris aloes compositi 3j;
Ferri sulphatis ʒj;
Pulveris rhei ʒss;
Balsami Peruviani q. s.;

Fiant pilulæ xxxvj. quarum capiat æger duas nocte maneque.

4. In relieving pain by demulcents, carminatives, anti-spasmodics, and opiates.

R. Spiritûs ætheris sulphurici compositi f. 3ss;
Tincturæ opii m xv;
Aquæ cinnamomi f. ʒxij;

Misce pro haustu in dolore sumendo.

R. Pulveris tragacanthæ compositi 3j;
Tincturæ cardamomi compositæ f. ʒss;
Confectionis aromaticæ 3j;
Aquæ menthæ piperitæ f. ʒvij;
Syrupi zingiberis f. ʒss;

Misce; cujus sumat æger cochlearia tria magna urgenti flatu vel dolore.

R. Magnesiæ 3j;
Liquoris calcis f. ʒvii;
Tincturæ cardamomi f. ʒss;

Fiat mistura, cujus sumat æger cochlearia tria magna in dolore.

R. Confectionis aromaticæ 3j;
Spiritûs ætheris sulphurici compositi f. ʒss;
Misturæ camphoræ f. ʒvij;
Syrupi zingiberis f. ʒss;

Misce: sumantur cochlearia tria magna in dolore.

5. In removing diarrhœa, should it accidentally occur, by absorbents; and if the fæces be of an unnatural clay-like or whitish colour, by mercury, especially the submuriate.

R. Confectionis aromaticæ 3ss ;

Misturæ cretæ f. 3x ;

Tincturæ opii ℥ x ;

Fiat haustus urgenti diarrhœa capiendus.

6. In restoring the tone of the stomach by bitters combined with astringents and aromatics ; the mineral acids ; chalybeates ; by keeping the extremities warm ; cold bathing ; by the use of mineral waters, more particularly those of Buxton and Seltzer ; by a diet consisting of light animal food, carefully avoiding the more indigestible foods and flatulent vegetables ; by abstaining from malt liquor, and employing soda-water, and toast and water, weak brandy and water, or water mixed with the least acescent wines, as Madeira or sherry, as common drink ; and, lastly, by warm clothing, more especially about the feet and legs.

R. Quassiæ rasuræ 3j ;

Corticis aurantii concisæ 3jss ;

Aquæ ferventis Oj ;

Stent in vase aperto per horæ spatium, et cola. Infusi colati capiat æger cochlearia quatuor bis quotidiè.

The various bitter infusions described in the pharmacopœias must be successively employed in obstinate cases ; and the combination of quinine with purgatives is highly advantageous. The chalybeate preparations are also valuable remedies.

[Dyspeptics should masticate their food properly, take a small quantity of fluid at each meal, exercise in the open air, refrain from business, go into the country, avoid late suppers, and sleep on a hard mattress.]

HYPOCHONDRIASIS.—VAPOURS—LOW SPIRITS.

SYMPTOMS.—Dyspepsia, sense of heat and pain in the hypochondria ; languor, listlessness, want of resolution and activity, disposition to seriousness, sadness, and timidity as to future events ; an apprehension of the worst, and most unhappy state of them, and therefore upon slight grounds a dread of great evil. Particular attention to health ; and, upon

any unusual feeling, a fear of imminent danger, and even death itself. In respect to all these feelings and apprehensions, the most obstinate belief and persuasion.

CAUSES.—*Predisposing*.—The melancholic temperament.

Exciting.—All the causes of dyspepsia; every sedative impression upon the mind.

Proximate.—A torpid state of the brain and nervous system.

DIAGNOSIS.—*From dyspepsia*.—By the affection of the mind being greater, that of the stomach less, than in idiopathic dyspepsia. Hypochondriasis occurs only in the melancholic temperament, at the middle period of life, and is increased as age advances; dyspepsia chiefly occurs in the sanguineous temperament, at an early period of life, and is diminished by time.

PROGNOSIS.—*Unfavourable*.—The melancholic temperament exquisitely formed, as indicated, previously to the disease, by the usual mental and corporeal characteristics, when, not unfrequently, it terminates in confirmed melancholia; combined with other diseases, which are aggravated by a diminished energy of the brain and nervous system; the long continuance of the disease often inducing seirrhosis of the viscera, and various cachectic affections.

TREATMENT.—*Indications*.—I. To restore the energy of the brain and nervous system; and to obviate the morbid association of ideas, by which the disease is characterized.

II. To remove the dyspepsia and other concomitant symptoms.

The first indication can alone be accomplished:

By diverting the attention of the patient from his own feeling by change of scene; engaging his attention by new and interesting objects; convivial society; various amusements and rural sports; moderate and regular exercise; gaining his confidence; condoling with him rather than ridiculing his foibles; and persuading him of a gradual recovery from his ideal illness, by some innocent medicaments regularly administered.

The second, by;

1. The treatment laid down for the cure of dyspepsia.
2. Chalybeate mineral waters: Cheltenham, Brighton, Hampstead, and Tunbridge.
3. Tonics and antispasmodics; particularly Peruvian bark, quinine, preparations of iron, castor, camphor, valerian, assa-fœtida, opium.
4. Blisters, and sinapisms.
5. Mercurial purges.
6. Mereury, even carried so far as to affect the mouth, has been attended with much success.
7. Warm and cold bathing.
8. The mineral waters recommended for dyspepsia, and also Harrowgate water.
9. Light nutritive diet; as common drink, wine and water, wine and soda-water, should be substituted for malt liquors.

The violent pains in the head and stomach, to which hypochondriacs are subject, may be relieved by æther, musk and opium, separately or combined.

R. Tineturæ castorei f.3ss;
 Spiritûs ammoniæ compositi f.3ss;
 Misturæ camphoræ f.3xij;
 Syrupi aurantii f.3j;

Fiat haustus ter in die sumendus.

R. Decoeti aloes compositi f.3jss;
 Fiat haustus eirea meridiem quotidie sumendus.

R. Decoeti aloes compositi f.3v;
 Aquæ menthæ piperitæ f.3x;
 Spiritûs ætheris sulphurici compositi f.3j;
 Syrupi aurantii f.3j;
 Fiat haustus bis in die capiendus.

R. Tineturæ valerianæ f.3j;
 ——— castorei f.3ss;
 Misturæ camphoræ f.3xij;
 Syrupi zingiberis f.3j;
 Fiat haustus ter in die hauriendus.

R. Spiritus ammoniæ foetidi f.3j;
 Misturæ camphoræ f.3xij;
 Magnesiae sulphatis ʒj;
 Syrupi aurantii f.3j;

Fiat haustus ter in die capiendus.

R. Castorei 3ss;
 Camphoræ 3j;
 Pilulæ galbani compositæ ʒjss;
 Fiant pilulæ xxxvj. quarum sit dosis duæ ter in die, super-
 bibendo cyathum parvum infusi anthemidis.

CHLOROSIS.—RETENTION OF THE MENSES.

SYMPTOMS.—Heaviness; listlessness to motion and fatigue on the least exercise; palpitations of the heart; pains in the back, loins, and hips; flatulency and acidity in the stomach and bowels, and many symptoms of dyspepsia.

The appetite is singularly depraved; lime, chalk, and other absorbents, are greedily eaten, when the accustomed food is rejected. As the disease advances, the lips lose their colour; the eyes are encircled with a livid areola; the face becomes pale, assumes a yellowish hue, and the whole body has a leucophlegmatic appearance, with every indication of want of power and energy in the constitution. The feet are affected with œdematous swellings; the breathing is hurried by the slightest exertion; the pulse is quick but small; the patient is affected with various symptoms of hysteria, cough, and sometimes confirmed hectic fever.

CAUSES.—Debility or laxity of the constitution in general, and of the uterine system in particular.

TREATMENT.—*Indications*.—I. To invigorate the system in general.

II. To excite the action of the uterine vessels.

To fulfil the first indication,

1. A nutritive diet, and the moderate use of wine; regular exercise on horseback, taking care not to induce fatigue; cheerful society.

2. An emetic of ipecacuanha, or sulphate of zinc.
3. Gentle aperients of aloes, myrrh, and bitters.

R. Pilulæ aloes eum myrrha ʒj;
Hydrargyri submuriatis gr. iij;

Fiant pilulæ xij. quarum sumat ægra unam vel duas pro re nata.

R. Pulveris aloes eum ferro ʒj;
Saponis duri ʒij;
Syrupi zingiberis q. s.;

Fiat massa in pilulas xxiv. dividenda, quarum sumantur duæ alterna quaque nocte.

R. Extracti gentianæ,
——— colocynthidis compositi, āā ʒss;

Fiant pilulæ xij. : sit dosis duæ pro re nata.

4. Tonics, especially preparations of iron, either alone, or joined with myrrh, quinine, Peruvian bark, cascarilla, quassia, gentian, tansy, chamomile, and aromatics; adding an alkali, where it is chemically advisable, to obviate cardiac symptoms: the best chalybeates are, the sulphate of iron, the muriate of iron, ammoniacal iron, and tartarized iron, as in dyspepsia.

R. Extracti glycyrrhizæ eoneisi ʒij;
Aquæ puræ f. ʒxvj. Coque et cola:

R. Myrrhæ ʒij;
Ferri sulphatis gr. xxiv;
Potassæ subcarbonatis ʒj;
Mucilaginis acaciæ ʒss;
Decoeti glycyrrhizæ, supra præscripti, ferventis f. ʒxiv;
Tincturæ zingiberis f. ʒj;

Myrrham et ferri sulphatem eum potassæ subcarbonate et mucilagine tere donec perfecte commisceantur, dein gradatim adde decoetum et denique tincturam.

This mixture is an improved recipe on that of Dr. Moses Griffith; the dose is three spoonfuls two or three times a day. Similar to this is the *mistura ferri composita*.

R. Pilulæ ferri eum myrrhæ ʒss;
Fiant pilulæ duæ bis terve in die sumendæ.

R. Extracti tanacetii 3jss;
Ferri sulphatis 3j;

Fiant pilulæ xxiv. quarum capiat duas ter in die.

R. Extracti tanacetii 3j;
Ferri tartarizati 3jss;
Pilulæ galbani compositæ 3ss;

Fiat massa in pilulas xxxvj. dividenda, e quibus sumat ægra tres ter quotidie.

R. Ferri sulphatis gr. xij;
Extracti gentianæ 3j;
Pulveris cinnamomi compositi 3ss;

Fiat massa in pilulas xvij. dividenda, quarum capiat ægra duas ter in die, superbibendo haustum infusi alicujus amari.

R. Ferri tartarizati 3j;
Extracti anthemidis 3jss;
Balsami Peruviani q. s.;

Fiat massa in pilulas xxxvj. dividenda, e quibus capiat ægra quatuor bis ter in dies.

R. Tincturæ ferri muriatis 3iij;

Cujus adhibeantur guttæ sex ter quaterve die ex poculo alicujus liquoris idonei, infuso theæ excepto.

5. Sea bathing, cold bathing, and the internal use of the Bath, Tunbridge-wells, Pyrmont, or Spa waters. [It is extremely bad practice to exhibit emmenagogues unless the patient is developed and the general health good; for if there is defective development, the uterus cannot perform its functions. When the health is restored, the uterus, like all other organs, will perform its functions. Dr. Loudon applied two leeches to the lower part of each breast every second day for a month, and at the end of the third week there was great turgescence, and the menses soon appeared.]

The other indication is best answered:

1. By walking, jumping, dancing, frequent friction; pediluvium; semicupium; heat applied by steam, or otherwise, to the region of the uterus.

2. By gentle electric shocks though the pubic region.

3. By purges that act especially upon the rectum; as aloes and scammony.

R. Extracti aloes socotrinæ 3j;
Lactis communis 3vj;
Solve pro enmate bis in septimanis adhibendo.

R. Scammoniae pulverisatæ 3ss;
Saponis duri 3jss;
Aquæ ferventis f. 3vij;
Fiat enema quarta quaque nocte injiciendum.

R. Tincturæ aloes compositæ f. 3ss;
Pro dosi alternis auroris.

R. Pulveris scammoniae 3ss;
Hydrargyri submuriatis ʒj;
Extracti colocynthidis ʒj;
Syrupi zingiberis q. s.;
Fiat massa in pilulas xij. dividenda, quarum tres pro dosi
sumendæ.

4. By Spanish flies, hellebore, and savine.

R. Tincturæ cantharidis f. 3ij;
————— cardamomi f. 3iv;
Misce; cujus sumat ægra guttas lx. vel coehleare mi-
nimum ter in die ex quovis vehiculo idoneo.

R. Extracti hellebori nigri ʒj;
————— gentianæ ʒij;
Fiant pilulæ xij. quarum sumantur duæ nocte maneque.

R. Pulveris myrrhæ compositi ʒss;
Balsami Peruviani q. s.;
Fiat bolus ter in die sumendus.

5. By inhaling two gallons of oxygen gas mixed with one of common air, twice a day.

[The secale cornutum in decoction 3iij to 3vij of water, with decoction of aloes and the mistura ferri composita, in the proportion of four ounces of each, is a valuable remedy; when the digestive functions are restored to a healthy condition.—See Ryan's *Manual of Midwifery*, 3d edition, 1832.

A drachm of liquor ammonia, with a pint of milk, injected into the vagina daily, is a valuable remedy.—*Op. cit.* Dr. Loudon has lately applied two leeches to the inferior surface of the mammæ every second day with success.—See Chlorosis.]

ORDER III.

SPASMI. SPASMODIC DISEASES.

CHARACTER.

Irregular motions of the muscles, or of the muscular fibres.

GENERA.

In the animal functions.

TETANUS,	.	.	.	Rigid spasm.
CONVULSIO,	.	.	.	Convulsion.
CHOREA,	.	.	.	St. Vitus' dance.
RAPHANIA,	.	.	.	Raphany.
EPILEPSIA	.	.	.	Epilepsy.

In the vital functions.

PALPITATIO,	.	.	.	Palpitation of the heart.
ASTHMA,	.	.	.	Asthma.
DYSPNŒA,	.	.	.	Difficulty of breathing.
PERTUSSIS,	.	.	.	Hooping cough.

In the natural functions.

PYROSIS,	.	.	.	The water brash.
COLICA,	.	.	.	Cholic.
CHOLERA,	.	.	.	Cholera.
DIARRHŒA,	.	.	.	Purgings.
DIABETES,	.	.	.	Immoderate flow of urine.
HYSTERIA,	.	.	.	Hysterics.
HYDROPHOBIA,	.	.	.	Hydrophobia.

TETANUS.—RIGID SPASM.

SPECIES.—1. *Tetanus trismus*; spastic rigidity, chiefly of the under jaw.

2. *Tetanus emprostotonos*; the body being drawn or bound forward.

3. *Tetanus opisthotonos* ; the body drawn backwards.

4. *Tetanus pleurosthotonos* ; the body bent sideways.

SYMPTOMS.—Sense of stiffness in the back part of the neck, rendering the motion of the head difficult and painful ; difficulty of swallowing ; pain, often violent, referred to the sternum, and thence shooting to the back ; spasm of the muscles of the neck, pulling the head strongly backwards ; rigidity of the lower jaw, which increasing, the teeth become so closely set together, as not to admit of the smallest opening, when the affection is called *Trismus*, or *Locked Jaw*.

If the disease proceed further, a greater number of muscles become affected, as those of the spine, bending the trunk of the body forcibly backwards ; in this state the disease is termed *Opisthotonos* ; or forwards, when it constitutes the *Emprosthotonos* ; or laterally, *Pleurosthotonos*.

At length every organ of voluntary motion partakes of the disease ; the extremities are rigidly extended ; the abdominal muscles are strongly retracted ; hence constiveness and suppression of urine are generally produced ; the eyes are immovable in their sockets ; the tongue often protruded beyond the teeth, or pulled back into the fauces ; the forehead is drawn up into furrows ; the cheeks backwards towards the ears, and the whole countenance exhibits the most shocking distortion.—The stiffened parts are affected with violent contractions, which occasion the most excruciating pain.—A remission of these occasionally takes place every ten or fifteen minutes, but they are renewed, with aggravated torture, from the slightest causes, even the least motion of the patient, or the touch of an attendant.—At length one universal spasm puts a period to a most miserable state of existence.

CAUSES.—*Remote*.—The male sex ; robust and vigorous constitution ; warmth of climate.

Exciting.—Vicissitudes of temperature ; exposure to cold, united with moisture ; or to excessive heat ; injuries of nerves or tendons, by puncture or laceration ; the presence of irritating substances in the stomach or alimentary canal ; irritation of the extremities of the nerves ; affections of the mind.

Proximate.—Irritation in the cerebrum and spinal marrow.

PROGNOSIS.—Will ever be most unfavourable; more so when the disease arises from injury of nerves than when proceeding from cold; when it comes on suddenly, and quickly advances to a violent degree, than when slow in its progress; when the spasmodic contractions quickly succeed each other, and are excited by very slight causes, than when there is a considerable interval, and the rigidity forms the chief of the disease.

TREATMENT.—*Indications*.—I. To remove causes that are obvious.

II. To allay the inordinate action of the brain and nervous system; or to excite a new and powerful action, and thereby supersede the original and morbid one.

When the disease is the consequence of a puncture or small wound, it has been supposed to arise from the partial division of a nerve. In this case a free dilatation of the wound should be made.—If arising from local irritation, the nervous communication with the brain should, if practicable, be cut off.

The second indication requires,

1. The most powerful antispasmodics, as opium with musk, camphor, and æther.

R. Camphoræ,
Moschi, āā ʒss;

Fiat pulvis ex quovis vehiculo idoneo eapiendus.

R. Camphoræ gr. viij;
Moschi gr. vj;
Pulveris opii gr. ij;

Fiat pulvis ex syrupo sumendus.

R. Misturæ camphoræ fortioris f. ʒviij;
Spiritus ætheris sulphurici compositi,
Syrupi rhæados, āā f. ʒss;
Tincturæ opii f. ʒj;

Misce: sit dosis cochlearia tria magna.

R. Ætheris rectificati f. ʒij;
Misturæ camphoræ fortioris f. ʒviij;
Syrupi croci f. ʒss;

Fiat mistura: dosis cochlearia tria ordinaria.

One of these formulæ should be administered every one, two, three, or four hours, according to the severity of the disease, and the effects of prior doses.

2. The cold bath, or affusion of cold water; successful cases of the use of which are related by Dr. Cochrane, in the Medical Commentaries; Dr. Wright, in the London Medical Observations; Dr. Currie, in his Medical Reports; and by others. [Tobacco clysters by Drs. Reid and O'Beirne of Dublin.]

3. Mereury; administered both externally and internally so as to excite salivation.—It was also successfully employed by Dr. Clarke, as a *preventive* after wounds and punctures.

4. Peruvian bark; and wine in large quantities. This plan was found successful by Dr. Rush, in the Transactions of the American Philosophical Society; Dr. Hossack, in the New York Repository; and Dr. Currie, in his Reports.

5. Alkalis and alkaline baths; a hot bath impregnated with carbonate of potass or quick-lime, was found serviceable by a Dr. Stutz; but in this country, physicians are not disposed to trust to such means.

6. The tinctura ferri muriatis has been successfully used, and the petroleum or oleum petrolci.

7. Stimulating and antispasmodic applications.

R. Linimenti saponis compositi f. ℥jss ;

Tincturæ opii f. ℥ss ;

Fiat embrocatio, cujus illinatur quarta pars ter in die in partes affectas.

R. Olei cajuputæ f. ℥jss ;

Tincturæ opii f. ℥ss ;

Fiat linimentum eodem modo utendum

R. Tincturæ cantharidis f. ℥ss ;

Linimenti camphoræ f. ℥j ;

Tincturæ opii f. ℥iij ;

Liquoris ammoniæ carbonatis f. ℥j ;

Fiat embrocatio partibus affectis applicanda.

EPILEPSIA.—EPILEPSY.

SPECIES.—1. *Epilepsia cerebialis*:—suddenly coming on without manifest cause; not preceded by any troublesome sensation, unless perhaps of vertigo or dimness of sight.

2. *Epilepsia sympathica*:—without manifest cause; but preceded by the sensation of a certain aura rising from some part of the body to the head.

3. *Epilepsia occasionalis*:—arising from manifest irritation, and ceasing when the irritation is removed.

SYMPTOMS.—Sudden loss of sense, and power of motion, so that, if the patient be standing, he immediately falls, or, with convulsions, is thrown to the ground, frequently with a violent cry.—During the fit there are strong convulsive motions of the limbs and trunk of the body, and spasms of the muscles of the face and eyes, producing various distortions of the countenance.—After a longer or shorter continuance of the convulsions, they cease altogether, and leave the patient motionless, still in a state of absolute insensibility, and under the appearance of a profound sleep.—The fit is frequently preceded by pain in the head; lassitude; some disturbance of the senses; unquiet sleep; unusual dread; noise in the ears; palpitation of the heart; coldness of the joints; sensation of a cold air, the *aura epileptica*, arising in some part of the extremities, and gradually creeping upwards, until it reaches the head, when the patient is instantly deprived of his senses, and falls as above described.

CAUSES.—*Predisposing*.—Great irritability of the nervous system; hereditary predisposition.

Exciting.—Mechanical, chemical, or mental stimuli; especially the effects of joy and surprise; sudden fright; fits of passion, or any vehement emotion of the mind; plethora of the vessels of the head; worms; dentition; acute pain; excessive evacuations; suppression of accustomed discharges; tumours compressing the brain, or any part of the nervous system.

DIAGNOSIS.—*From convulsion*.—By its terminating in profound sleep; by the total abolition of the senses.

From apoplexy.—By the voluntary motions in the one disease being increased; in the other, totally suspended.

From hysteria.—See Hysteria.

PROGNOSIS.—*Favourable.*—The disease being sympathetic, occurring before the age of puberty, and arising from causes easy of removal; there being no hereditary predisposition; an intermittent fever, or cutaneous eruption, has sometimes effected a cure.

Unfavourable.—The reverse of the above. When the disease comes on after the age of puberty, when it has arisen from an hereditary predisposition, or by frequent repetition has become confirmed, the probability of cure is slight; especially where the memory and judgment have become impaired.

TREATMENT.—*Indications.*—I. To abate the violence and shorten the duration of the paroxysm.

II. To prevent its recurrence.

If there be symptoms of determination of blood to the head, or if the patient be of a full plethoric habit, bleeding from the arm, jugular vein, or from the temporal artery, will be advisable.

If, on the contrary, the presence of debility is obvious, the most powerful antispasmodics; sinapisms to the lower extremities; anodyne and antispasmodic clysters; but in general, little else can be done, during the paroxysm, than to use the necessary precautions to prevent the patient injuring himself in the violence of the convulsions, and taking care there is no pressure on the vessels of the neck.

R. Tincturæ asafœtidæ f. ℥ss;

———— opii f. ʒj;

Aquæ destillatæ f. ʒviij;

Fiat enema.

The recurrence of the paroxysm is sometimes prevented,

1. By removing causes that continue to operate.
2. By avoiding the occasional or exciting causes; as, overdistention of the vessels of the head, however induced; fits of passion, or other violent emotions of the mind, &c.
3. If the paroxysm be preceded by the aura epileptica, it has been advised to apply blisters or caustic to the part from

which the sensation arises: destroying the communication with the brain, by dividing the nerve, or by means of a ligature applied round the limb, has been resorted to, but with little success.

4. If the patient be of a plethoric habit, by occasional bleeding; abstemious diet; issues or setons in the neck; [antimonial pustulation;] frequent purges, &c.

5. If weak and irritable, by tonics; as cinchona; [quinine;] sulphate of zinc; oxide of zinc; ammoniacal copper; sulphate of copper; nitrate of silver; [mistletoe and oak-bark.]

R. Pulveris cinchonæ ʒss;
 ———— valerianæ ʒss;

Fiat pulvis ter in die sumendus.

R. Tincturæ cinchonæ compositæ f. ʒj;
 ———— valerianæ ammoniatæ ℥ xx;
 Infusi quassiae f. ʒxij;

Fiat haustus ter in dies capiendus.

R. Zinci oxydi gr. vj;
 Extracti gentianæ gr. iv;
 Syrupi zingiberis q. s.;

Fiant pilulæ duæ ter in die capiendæ cum haustulo infusi anthemidis.

R. Zinci sulphatis gr. $\frac{1}{4}$;
 Extracti anthemidis gr. x;

Fiant pilulæ duæ ter in die sumendæ.

R. Zinci sulphatis gr. j;
 Extracti cascarillæ gr. viij;
 Olei caryophylli ℥ ij;

Fiant pilulæ duæ ter in die sumendæ.

R. Cupri ammoniati gr. ij;
 Confectionis rosæ gr. v;

Fiat pilula ter quotidie capienda.

R. Cupri sulphatis gr. ij;
 Confectionis rosæ ʒj;
 Extracti opii gr. iv;

Optimè misceantur in massam in pilulas xxiv dividendam, quarum capiat æger unam vel duas ter in die.

R. Argenti nitratis gr. j;
 Confectionis rosæ gr. v;

Fiat pilula ter in die deglutienda.

6. By regular exercise, especially walking and trotting a horse.

7. By cold bathing.

8. By antispasmodics; as valerian, castor, musk, æther, oleum succini, opium [hyosciamus, stramonium, acetate of lead, asafoetida, in large doses.

According to Mr. Earle, Dr. Brown, Dr. Reid of Dublin, pressure on the carotids during the fit has cut it short, and finally cured the disease].

9. When the attack of the disease can be foreseen by certain well-known feelings of the patient, an emetic given an hour before its approach has been known to prevent the fit; a large dose of opium also, or other powerful antispasmodic, administered in the same manner.

10. By digitalis, particularly if there be an accelerated pulse, when it should be given in doses, gradually increased, until the pulse is influenced by it.

11. The rhus radicans, in the praise of which Dufresnoy and Hufeland have written, is said to have occasionally cured epilepsy: but we know nothing of it in this country.

12. By the cicutaria, which is said by Dufresnoy to be useful.

13. The carbonate of potass is recommended by Drs. Michaelis and Wiedemann.

14. By mercury, as an alterative.

15. By the nux vomica, which has often been successful.

16. By the internal use of arsenic.

R. Liquoris arsenicalis m̄ iv-viii;
Tincturæ cinnamomi f. ʒj;
Syrupi rhæados f. ʒj;
Aquæ pimentæ f. ʒxij.

Misce: fiat haustus ter in die sumendus.

17. By drawing electric sparks from the head.

18. By the viscus quercinus, or mistletoe, recommended by Dr. Frazier.

R. Visci quercini pulverisati ʒss-ʒj;
Aquæ menthæ piperitæ f. ʒxij;
Fiat haustus ter in die sumendus.

[Common oak bark, in doses of two drachms twice a day, produced more benefit in a confirmed case than any other remedy.—*Mackintosh*. In many cases, all known remedies are useless.]

19. By oxygen gas, extolled by Dr. Girtanner.

20. The *gratiola officinalis*, praised by Dr. Sommer, in his treatise *De Virtute Gratiolæ*. [Mugwort, in doses of fifteen grains, before the fit, was advised by Burdach and Hufeland.]

21. By change of climate and mode of life.

CHOREA SANCTI VITI.—THE DANCE OF ST. VITUS.

SYMPTOMS.—The disease is marked by convulsive motions, somewhat varied in different persons, but generally affecting the leg and arm of one side only. The lower extremity is mostly first affected; there is a kind of lameness and imbecility in one of the legs; and, though the limb be at rest, the foot is often agitated by involuntary motions, turning it alternately outwards and inwards. In walking, the affected leg is seldom lifted as usual, but is dragged along, as if the whole limb were paralytic; and when it is attempted to be lifted, that motion is unsteadily performed, the limb becoming irregularly and ludicrously agitated. The motions of the arm likewise are variously performed, or it is drawn by convulsive retractions in a direction contrary to that intended.

CAUSES.—General weakness and irritability of the nervous system; occurring between the tenth and fifteenth years of age. It is induced by various irritations; as teething, worms, offensive smells, poisons, affections of the mind, fright, horror, anger. [It is supposed to depend on irritation in the cerebellum, or spinal cord.]

PROGNOSIS.—It is never attended with danger, unless very violent in degree, when fever supervenes, and it often kills. It passes not unfrequently into epilepsy. [It may continue for life, though this rarely happens. It occurs in adults

of both sexes to the age of seventy. See Copland's *Dictionary of Practical Medicine*.]

TREATMENT.—*Indication*.—To increase the tone of the nervous and muscular system [to improve the general health].

After the administration of an emetic and mild aperient, tonics; especially the sulphate of zinc with musk, the antispasmodics, and other remedies, enumerated under the head Epilepsy.

Cold bathing and electricity.

Terror has sometimes effected a cure.

[Large doses of carbonate of iron generally cure this disease. Cod and tusk-liver oil, oil of turpentine, shower bath, purgatives, antispasmodics, emmenagogues, have been praised as remedies.]

A S T H M A.

SPECIES.—*Asthma spontaneum*; without manifest cause, or being accompanied by any other disease.

Asthma exanthematicum; from eruption, or other acrid effusion being repelled.

Asthma plethoricum; from the suppression of any usual evacuation of blood, or from spontaneous plethora.

SYMPTOMS.—The attack is usually preceded by sense of fulness about the stomach, lassitude, depression of spirits, drowsiness, and pain in the head; little, however, regarded by the patient. On the approach of the succeeding evening, a sense of tightness and stricture is perceived across the breast, with distressing straitness of the lungs, impeding respiration. The difficulty of breathing continues to increase for some length of time; both inspiration and expiration are performed slowly and with a wheezing noise; the speech becomes difficult and uneasy; a propensity to coughing succeeds, followed by the most anxious difficulty of breathing; the patient is threatened with immediate suffocation, and is obliged instantly to rise from an horizontal position; the face is sometimes turgid, and of a livid hue; at others it is morbidly pale

and shrink. These symptoms usually continue till towards the approach of morning, when a copious expectoration of mucus comes on, the breathing becomes less laborious and more full, the patient speaks and coughs with greater ease, and, feeling every way relieved, soon falls asleep. The dyspnoea and tightness across the chest remain for some days after the attack, and for several succeeding evenings an exacerbation occurs similar to that above described.

CAUSES.—Hereditary predisposition; cold and moist atmosphere; sudden changes of temperature; retrocedent gout; suppression of long-accustomed evacuations; intense study; certain fevers; irritation of the bronchial system by aërial acrimony or other causes; irritation of the stomach, uterus, or other viscera.

Proximate cause.—Supposed to be spasm by Willis, Hoffman, Lacnec, Williams, Dr. Cullen; the presence of irritating causes according to Dr. Brec; [and emphysema and other diseases of the lungs, according to others; but the disease is purely nervous, when there are intervals of healthy respiration.]

DIAGNOSIS.—The pathognomonic symptoms are, paroxysms generally coming on at night, in which there is frequent and extremely anxious respiration; together with a wheezing noise, and sense of tightness across the chest.

PROGNOSIS.—*Favourable.*—The disease occurring in an early period of life, and in an unimpaired constitution. Arising from accidental causes, it is more easy of cure than when spontaneous, or the consequence of predisposition.

Unfavourable.—The disease coming on at an advanced period of life; frequent return of paroxysms, and their long continuance; symptoms indicating a tendency to phthisis pulmonalis, or to hydrothorax; anasarca swellings of the lower extremities; paralysis of the arms; tremulous respiration; weak irregular pulse; syncope; palpitation of the heart; paucity of urine; cold extremities. It sometimes has induced an aneurism of the heart and large vessels; and not unfrequently terminates in pneumonia.

TREATMENT.—*Indications*.—I. To moderate the violence of the paroxysm.

II. To prevent its recurrence.

The violence of the paroxysm is moderated by,

1. Bleeding, where the habit is plethoric; the disease of no long standing; the face flushed, &c.—On the contrary, in elderly persons, where the disease has become habitual, or where the face during the attack is preternaturally pale and shrunk, bleeding is inadmissible.

It must be remembered, however, that the propriety of blood-letting in any species of asthma has been much doubted; and in those cases which appear to demand it, it is better to take away small quantities at intervals, in order to allow the contractile power of the vessels to be exerted in proportion as the vessel loses its contents. [It must be used when there is extreme difficulty of respiration.

Artificial inflation of air by means of a pair of bellows affords great relief in the paroxysm. There should be free admission of air, the dress loosened on the neck and chest. Galvanism has afforded immediate relief in several recent cases at the Hôtel Dieu of Paris; and also in the practice of Dr. Wilson Philip.]

2. Gentle aperients, especially such as are recommended to obviate costiveness in dyspepsia; and antispasmodic clysters.

R. Misturæ asafœtidæ f. ʒviij;
Fiat cnema pro re nata adhibendum.

3. The application of blisters [and counter-irritants] to the chest.

4. Antispasmodics:—opium, sulphuric æther, or both united; asafœtida, in cases where spasmodic difficulty of breathing is obvious; [hyosciamus, belladonna, colchicum, valerian, quinine, eonium, prussic acid, lactucarium, balsams, &c. &c.

Murray of Dublin and Seudamore advise the inhalation of iodine vapour, and Gannal of Paris chlorine gas in phthisis. The editor has tried both in asthma without success.]

The smoking of stramonium has lately been very generally practised, in some cases with advantage: tobacco is also occasionally serviceable. [The lobelia inflata or Indian tobacco is one of the best remedies. Its dose is from 3ss to 3ij of the tincture, and the proportions in this formula are ʒi to Oss.]

5. Expectorants, where expectoration is difficult, of squills, tartarized antimony, and ammoniacum; tinctura nicotiana, in nauseating doses.

6. Pediluvium, and the warm bath. [Cold bathing has been recommended by Cælius Aurelianus, Floyer, Withers, Millar, Ryan, Bree, Hufeland, and Copland. The editor knows a gentleman who completely cured himself by affusing cold water on his head every morning.]

7. Coffec.

The recurrence of the paroxysm is prevented,

1. By avoiding the exciting causes.
2. By issues, or occasional blisters.
3. Gentle aperients of rhubarb, with bitters.
4. Emetics, given a short time before the expected paroxysm, have in some instances prevented its attack.

5 Diaphoretics, particularly the pulvis ipecacuanhæ compositus.

6. Expectorants; as squills; ammoniacum; myrrh; antimonium tartarizatum; a decoction of senega.

7. Opium combined with a diaphoretic.

8. Digitalis; which, combined with myrrh, checks an excessive secretion from the lungs.

9. Oxygen gas.

10. Inhaling the vapour of æther, [iodine, chlorine.]

11. The smoking and chewing of tobacco.

12. The occasional use of stomachic bitters and absorbents; Peruvian bark, chalybeate waters, and other remedies recommended for dyspepsia.—The flatulence accompanying asthma is often relieved by a small portion of acetous acid.

13. Light and nutritive diet; avoiding flatulent and indigestible aliment.

14. Warm clothing : especially flannel next the skin.
15. Regular exercise ; on horseback, or by swinging or sailing.
16. Removal from a cold to a warm climate, or the one which is found to agree the best with the patient. [When the disease is caused by the repression of an eruption, we should irritate the part primarily affected. In one case, a gentleman became asthmatic in consequence of having an eruption on his leg suddenly removed. He was troubled with asthma for thirty years, but having received an injury on the leg, ulceration followed, and he was completely cured of his complaint.]

PERTUSSIS.—HOOPING-COUGH.

SYMPTOMS.—The disease comes on with slight difficulty of breathing, thirst, quick pulse, hoarseness, cough, and all the symptoms of common catarrh. In the second or in the third week after the attack, it puts on its peculiar and characteristic symptoms.—The expiratory motions, peculiar to coughing, are made with more rapidity and violence than usual ; and after several of these expirations thus convulsively made, a sudden and full inspiration succeeds, in which, by the air rushing through the glottis with unusual velocity, a peculiar sound is caused, which has obtained the name of hoop.—When this sonorous inspiration has happened, the convulsive coughing is again renewed, and continues in the same manner as before, till a quantity of mucus is thrown up from the lungs, or the contents of the stomach are evacuated by vomiting, which generally terminates the fit : the patient is then most frequently enabled to return to the amusement he was employed in before its accession, and often expresses a desire for food ; but when the attack has been severe, it is succeeded by much fatigue, hurried respiration, and general languor and debility.—After a longer or shorter continuance of the disease, the paroxysms become less severe, and at length entirely cease.—In some instances it has, however, been protracted for several months, and even for a year.

CAUSES.—Children are most commonly the subjects of the disease ; and it is supposed to depend on a specific contagion ;

[and at first is a nervous disorder, but may be followed by pulmonary or cerebral congestion or inflammation.]

DIAGNOSIS.—It is distinguished from every other disease by the convulsive cough, followed by the peculiar sonorous inspiration above described; and terminating in vomiting or expectoration.

PROGNOSIS.—*Favourable.*—Moderate and free expectoration; the strength little impaired; the fits neither frequent nor violent; in the interval, the respiration free; the appetite good; the absence of fever; moderate hæmorrhage from the nose.

Unfavourable.—The disease occurring in children under two years of age; in children born of phthisical or asthmatic parents; much fever, with symptoms of pneumonitis; very copious or scanty expectoration; great debility; convulsions; [or coma.]

TREATMENT.—*Indications* —1. In the early stage of the disease, to moderate its violence, and to palliate urgent symptoms.

11. In the advanced period, to interrupt its course; and put a stop to the disease sooner than it would have spontaneously ceased.

The first indication is to be effected by,

1. Bleeding; if there be much inflammatory pyrexia, or great difficulty of breathing, especially by leeches to the chest.

2. Emetics and nauseating medicines; of ipecacuanha and antimony, in divided doses, [according to the age and strength of the patient.]

R. Vini antimonii f. ʒij;
Fiat haustus emeticus.

R. Vini ipecacuanhæ f. ʒss;
Fiat haustus emeticus.

R. Liquoris antimonii tartarizati f. ʒij;
—— ammoniæ acetatis f. ʒj;
Aquæ menthæ viridis f. ʒvss;
Oxymellis f. ʒss;
Misce; cujus capiat æger cochleare unum magnum quartis
vel sextis horis.

R. Aceti scillæ f. ʒij;

Oxymellis f. ʒij;

Misce; cujus sit dosis cochleare minimum subinde.

R. Extracti conii gr. j—iv;

Fiat pilula quavis nocte sumenda.

3. Gentle laxatives of senna, manna, and the like.

4. Blisters, [or antimonial ointment to the chest or abdomen (Autenrieth), but it must be used sparingly in children, whom it has destroyed by irritation or poisoning. Friction of the surface contributes much to the restoration of the cutaneous function.]

5. Inhaling the steam of hot water; alone, or medicated with æther, conium, papaver, hyosciamus, [iodine, or chlorine.]

6. Tepid bath; pediluvium.

7. Tinctura cantharidis; alone, or united with tinctura opii camphorata; and so administered as to produce a slight degree of strangury. [This is highly extolled by Graves and Beatty of Dublin.—*Dublin Journal of Medical Science*, 1832.]

The second indication is to be fulfilled,

1. By tonics; Peruvian bark; preparations of steel and zinc; arsenic, proportioning the dose to the age of the patient. [When the disease is intermittent, quinine is indicated.]

In violent cases, the chest should be frequently examined with the stethoscope. When the brain is affected, we should employ the treatment described in phrenitis and meningitis.]

2. Antispasmodics; opium; musk; asafoetida; amber; castor, administered in like manner.

3. Narcotics; as conium; hyosciamus; aconitum; belladonna; digitalis; acidum hydro-cyanicum.

A grain of the extract of conium and hyosciamus may be given every six hours, and a quarter of a grain of the others, and gradually and cautiously increased.

The prussic or hydro-cyanic acid is a very uncertain medicine. The dose is [half a] drop to a child four years of age, every six [or eight] hours.

4. By antispasmodics, applied externally.

R. Olei macis ʒjss;
 Cerati saponis ʒij;
 Fiat emplastrum pectori applieandum.

R. Extracti opii ʒss;
 Cerati saponis ʒij;
 Fiat emplastrum pectori imponendum.

R. Olei succini rectificati f.ʒj;
 Linimenti saponis compositi f.ʒx;
 Fiat embrocatio, ejus illinatur cochleare minimum ter
 in die in dorsum.

[This last is analagous to a popular remedy—Roche's royal embrocation.]

5. Change of air [is highly beneficial.]

[6. Correct the acidity of the stomach by soda, potass, magnesia, or liquor calcis. The clothing should be warm.]

PYROSIS.—THE WATER-BRASH.

SYMPTOMS.—The disease usually comes on in the morning or forenoon, when the stomach is empty; commencing with ardent pain at the pit of the stomach, with sense of constriction, as if that organ were drawn towards the back.—The pain is increased by an erect position, and therefore the body is bent forward.—After a short time an eructation takes place of a thin watery fluid in considerable quantity; sometimes of an acid taste, often quite insipid.—The eructation is frequently repeated, and at length gives relief to the pain, and puts an end to the fit.

CAUSES —*Predisposing*.—It principally attacks those of a middle age; females more frequently than males; and generally the unmarried; people in low life, who live much on milk and a farinaceous diet, rather than those in better condition; fluor albus.

Exciting.—Application of cold to the lower extremities; violent emotions of the mind.

Proximate.—Spasm of the muscular fibres of the stomach, its blood-vessels and exhalants.

TREATMENT.—Pyrosis requires the removal of the exciting causes, and the exhibition of antispasmodics, especially æther; opium, musk, castor, volatile alkali, nux vomica, the smoking or chewing of tobacco, and the occasional use of the mineral alkali with absorbents, which should be given as recommended in the treatment of dyspepsia. [Nitrate of bismuth was much lauded at one time, but is now seldom employed.]

COLICA.—THE COLIC.

SPECIES.—1. *Colica spasmodica*; with retraction of the navel, and spasms of the abdominal muscles.

2. *Colica stercorea*; in persons subject to costiveness after long-continued constipation.

3. *Colica accidentalis*;—from acrid matter in the intestines.

4. *Colica pictorum*;—a sense of weight in the lower belly, colic pains, continual, with pain in the arms and back, ending sometimes in palsy.

5. *Colica meconialis*;—in new-born children.

6. *Colica calculosa*;—with a fixed hardness in a particular part of the abdomen; calculi ejected by the anus.

7. *Colica verminosa*;—from worms.

SYMPTOMS.—Violent pain and distention of the abdomen, attended with a peculiar sense of twisting or wringing around the navel; which, with the teguments of the belly, is frequently drawn inwards: and often the muscles are spasmodically contracted in separate portions, giving the appearance of a bag full of round balls. Obstinate costiveness; frequently there is a bitter taste in the mouth; thirst; slight febrile heat, and other symptoms, which indicate the presence of bile in the alimentary canal; often there are hiccup, and flatulent eructations. Vomiting in some cases continues frequent and bilious; and in some instances stercoraceous matter is thrown up, when generally inflammation follows, and the disease is called *Ileus*, and also *Volvulus*.

CAUSES.—*Exciting*.—Cold applied to the surface of the body, especially to the lower extremities and abdomen; austere, acid, or indigestible aliment; redundancy of acrid bile;

collections of indurated faeces, or of calcareous concretions, in the alimentary canal; flatus; certain metallic poisons, as lead; hysteria; translation of gout; the imprudent use of astringents in diarrhoea and dysentery; all these increased by a constitutional irritability of the intestines.

Another exciting cause of colic to be noticed in this place, is

WORMS.

The human primæ viæ are infested by five kinds of worms.

1. *Ascaris vermicularis*: the small white thread or maw-worm.
2. *Ascaris lumbricoides*: the lumbricus teres, or long round worm.
3. *Trichuris*: the long hair-tailed thread-worm.
4. *Tænia oseulis marginalibus*: the solium, or tape-worm.
5. *Tænia oseulis superficialibus*: the broad tape-worm.

The ascarides have usually their seat in the rectum; the lumbrici occupy the small intestines, and sometimes the stomach; the trichurides the cæcum; the tæniæ the whole track of the intestines, more especially the ileum.

Worms mostly produce symptoms of colic, and very frequently other symptoms, as variable appetite; foetid breath; picking of the nose; hardness and fulness of the belly; sensation of heat and itching in the anus; preternaturally red tongue, or alternately clean and covered with a white slimy mucus; grinding of the teeth during sleep; short dry cough; frequent slimy stools; emaciation; slow fever, with an evening exacerbation; irregular pulse; sometimes convulsion-fits.

Worms appear more frequently in those of a relaxed habit; those whose bowels contain a preternatural quantity of mucus or slimy matter; in those who live on vegetable food; in the dyspeptic; the eating of unripe fruit is a frequent cause of their production.

They are evolved from ovula that exist in the human body, and in no other situation. For further information on this

subject, consult, "*An Attempt to an Arrangement of human intestinal Worms*," published by the author in the fifth volume of the Memoirs of the London Medical Society.

Proximate.—Spasm of some part of the alimentary canal.

DIAGNOSIS.—*From enteritis*.—By the peculiar twisting pain, and retraction of the navel; by the absence of fever in the early part of the disease; by the pain in enteritis being increased, in colic alleviated, by pressure; by the irregular contraction of the abdominal muscles.

The same characteristic symptoms distinguish it from inflammation of other abdominal viscera.

PROGNOSIS.—*Favourable*.—The pain remitting or changing its situation; discharges of wind and fæces, followed by an abatement of symptoms.

Unfavourable.—Violent fixed pain; obstinate costiveness; sudden cessation of the pain, followed by more frequent hiccup, great watchfulness, delirium, syncope, cold sweats, weak tremulous pulse; the pulse becoming peculiarly hard—see *Enteritis*; and the pain, before relieved, now much increased upon pressure; volvulus: all the symptoms indicating supervening inflammation and mortification, from the accession of which the chief danger arises.

TREATMENT.—*Indications*.—I. To remove the causes, and procure evacuations.

II. To relax the spasm by opiates,

Evacuations must be procured.

1. By cathartics; at first by the more mild; as rhubarb, magnesia, sulphate of soda or magnesia, oleum ricini: if these prove ineffectual, calomel united with extractum colocynthis compositum, especially where there has been bilious vomiting. See Dyspepsia and Hepatitis.

One or two drops of the oleum crotonis seldom fails in producing evacuations.

2. Copious clysters; the common emollient, or with colocynth, or the purging salts, [or muriate of soda.]

R. Decocti seminis avenæ f. ℥xij;
Sodæ sulphatis ℥j;
Olei olivæ f. ℥jss;

Fiat enema purgans.

R. Infusi anthemidis f. ʒx;
 Sodæ sulphatis ʒj;
 Fiat cnema purgans.

R. Decocti althææ f. ʒx;
 Sodæ sulphatis ʒvj;
 Olei olivæ f. ʒj;
 Fiat cnema.

R. Extracti colocynthidis ʒj;
 Infusi sennæ f. ʒxij;
 Fiat cnema.

A copious injection of cold water has in some instances been followed by the desired effect. Should these be unsuccessful, recourse may be had to the injection of an infusion of tobacco.

3. Cold water dashed upon the extremities; or ice, snow, &c. applied in a cloth, or bladder, to the abdomen, have sometimes procured evacuations, in cases where every thing else had been unsuccessful.

4. Indurated fæces in the rectum are at times to be removed only, after being previously broken down, with the finger, or with an appropriate instrument.

The second indication requires,

1. Bleeding, if the concomitant strength of constitution and fulness of vessels, with strong pulse, are present; but it is seldom necessary. [It relieves spasm, and prevents inflammation in severe cases.]

2. Carminatives and antispasmodics; opium in large doses, cordial and opiate confection, cardamoms, &c.

R. Confectionis aromaticæ ʒss;
 Pulveris rhei gr. xvij;
 Aquæ menthæ piperitæ f. ʒxij;
 Tincturæ cardamomi f. ʒjss;
 Syrupi zingiberis f. ʒj;
 Fiat haustus quartâ vel sextâ quaque horâ sumendus.

R. Tincturæ cardamomi compositæ f. ʒiij;
 ——— opii ℥v;
 Syrupi croci f. ʒj;
 Aquæ menthæ piperitæ f. ʒxij;
 Fiat haustus quartis vel sextis horis capiendus.

R Confectionis opiatae ℥ss;

Olei carui ℥ ij;

Pulveris rhei q. s.;

Fiat bolus quartis vel sextis horis adhibendus.

3. Warm bath; semieupium, and fomentations to the abdomen.

4. Blisters, and warm plasters, [or hot turpentine frietions.]

5. Opiate clysters.

6. If there be great irritation of the stomach, with frequent vomiting, the saline medicine in an effervescing state.

7. Colic from the presenee of flatus is often relieved by some aromatic eordial, or a small portion of brandy.

Of the colica pictonum.

The colic induced by lead is more obstinate, and longer protracted, than the same disease brought on from common causes: and frequently terminates in paralysis of the wrists and upper extremities.

TREATMENT.—Oleum ricini, often repeated, is most effectual in procuring stools, and with fomentations and warm bath, generally removes the disorder in a few days; afterwards mercury united with opium, to excite slight salivation; alum; electricity; chalybeate and sulphureous waters; sinapis. [The free use of opium is highly beneficial.]

R. Hydrargyri submuriatis gr. $\frac{1}{4}$;

Extraeti opii gr. ss;

Confectionis rosæ q. s.;

Fiat pilula ter in die sumenda.

R. Aluminis purificati ℥ss;

Infusi rosæ f. 3xij;

Syrupi ejusdem f. 3j;

Fiat haustus ter in die sumendus.

[Large doses of sulphur are the best remedy.]

Colica pictonum is often productive of inflammation of the bowels and peritoneum, when the warm bath, general and local blood-letting, must be had recourse to.

Of colica verminosa.

1. The most esteemed remedies against ascarides and trichurides are purgatives of the submuriate of mercury, scam-

mony, aloes, rhubarb, spigelia, eowage, tin; also asafœtida, lime-water, tobacco.

R. Scammoniae gr. iij;
Hydrargyri submuriatis gr. ij;
Sacchari purificati gr. vj;
Fiat pulvis ex quovis vehiculo crasso sumendus.

R. Extracti aloes spicatae,
———— tanacetī, āā 3ss;
Olei rutæ ℥ xij;
Fiant pululæ xij. quarum sumat æger duas nocte manequē.

R. Radicis spigeliæ 3vj;
Aquæ ferventis Oj;
Macera per horas duas:

R. Hujus infusionis f. 3xij;
Tincturæ cardamomi f. 3j;
Syrupi zingiberis f. 3j;
Fiat haustus nocte maneque capiendus.

Asafœtida or tobaeco enemata.

R. Liquoris calcis Oj;
Fiat enema omni nocte injiciendum.

R. Limaturæ stanni f. 3j;
Electuarii c senna f. 3ij;
Syrupi zingiberis q. s.;
Fiat electuarium molle, de quo sumatur coehleare unum minimum quovis mane.

R. Camphoræ 3j;
Olei olivæ f. 3ij;
Solve pro enemate urgente ani prurigine adhibendum.

A decoction of the geoffræa inermis, or cabbage-bark, is a remedy much used, according to Dr. Wright, in the West Indies. [These remedies are of little use unless we improve the digestive functions.]

2. Against the tæniæ most of the drastic purges before prescribed have been resorted to. Madame Noufer's remedy is occasionally used with success.

The panacea of mereury in Noufer's nostrum is the sub-

muriate; and the male fern is the polypodium filix mas of Linnæus, and aspidium filix mas of Smith.

4. Turpentine has been given in some cases with success. In the year 1795, a letter was put into the hands of the author, from a medical gentleman in the East Indies, which contained an account of a large dose of the oil of turpentine having been swallowed by mistake, and which brought away several worms. In consequence of this, the oleum terebinthinæ was administered as an anthelmintic in the dose of from one drachm to an ounce to several patients with tæniæ; the result was equally uncertain with other purgatives. Of late its use has become more general. The best way to give it is mingled with syrup, and to direct the patient to take some gruel, arrow-root, or sago, after it. It produces a slight vertigo, and a sense of warmth and heat in the œsophagus and stomach, like to that produced by a glass of brandy; but these are very transient. Three or four evacuations are mostly produced by half an ounce.

CHOLERA.

SPECIES.—1. *Cholera spontanea*; occurring in warm weather without any manifest cause.

2. *Cholera accidentalis*; from acrid matter in the stomach and intestines.

SYMPTOMS.—Nausea, pain, and distension of the stomach and intestines; quickly succeeded by a violent and frequent vomiting and purging of bilious matter; frequent, small, sometimes unequal, pulse; much thirst and heat, followed by cold sweats; great anxiety, spasmodic contractions of the extremities, and sometimes universal convulsions; hiccup, and not unfrequently death, within the space of twenty-four hours, [or even within twelve hours.—*Mackintosh*.]

CAUSES.—Excessive heat, or sudden transitions from heat to cold; hence more frequent in autumn, from an exposure to cold evenings after very hot days; food of difficult digestion; rancid butter; the colder fruits; such as cucumber, melon, &c.; active and violent purgatives; poisons; violent passions of the mind; marsh miasma.

Proximate.—Inordinate secretion of bile of a vitiated quality.

PROGNOSIS.—*Favourable.*—A gradual diminution of the symptoms; especially vomiting, succeeded by sleep, or a gentle moisture on the skin. The disease, when protracted to the fifth, sixth, or seventh day, seldom proves fatal.

Unfavourable.—Spasm of the extremities; convulsions; great prostration of strength; cold clammy sweats; anxiety; short hurried respiration; continual hiccup; intermitting pulse; fetid vomiting; great distention of the abdomen.

TREATMENT.—*Indications.*—I. To allay the inordinate commotion of the stomach and intestines, by correcting the acrimony of the secreted bile, and by diminishing their irritability.

II. To restore the tone of the primæ viæ.

The first indication requires,

1. Copious tepid diluents of weak chicken broth, decoction of barley, &c.

2. Emollient clysters of starch, marsh-mallows, linseed.

3. Opium in large doses, both by the mouth, in the form of enema, or applied externally by friction, to the abdomen.

R. Tincturæ opii ℥ xv;
Confectionis aromaticæ ʒss;
Aquæ cinnamomi f. 3x;

Fiat haustus quartis vel sextis horis capiendus.

R. Confectionis aromaticæ ʒij;
Spiritus ætheris sulphurici compositi f. ʒiij;
Misturæ camphoræ f. ʒvj;
Tincturæ opii f. ʒss;
Syrupi rhæados f. ʒss;

Misce: sumat æger cochlearia duo magna subinde urgente spasmo.

4. Warm plasters and fomentations of poppies, with the addition of spiritus camphoræ; the saline draught in the act of effervescence.

The tone of the primæ viæ is to be restored,

By the use of the stomachic tonics, and other bitter remedies recommended for the cure of dyspepsia; beginning with the lighter preparations.

[EPIDEMIC, SPASMODIC, ASIATIC, BLUE, PESTILENTIAL AND MALIGNANT CHOLERA.

Vomiting and purging of watery matters without any appearance of bile; spasms in the inferior extremities and abdominal muscles extending through the body, speedily followed by sinking of the vital powers, and sometimes by lividity of the face and extremities and whole surface of the skin. This species of cholera was described by Sydenham, in 1669, as epidemic in this country, with the exception of the lividity. It was observed by Mr. Thackrah, of Leeds, in 1825. It appeared in Bengal in 1817, and spread over all Asia; visited Poland, Russia, England, Scotland, France, Ireland, and the United States of America in 1831-32. The Indian cholera was described by Curtis, 1782, Paisley, Sonnerat, Guddlestone, and Dr. James Johnson and many others.

This disease appeared at Jessore, in the centre of the Delta, and gradually spread through all parts of India, where it is now endemic. Dr. Copland gives the following account of the progress of this disease.

“ During 1818, it visited, in an easterly direction, the Burmese empire, the kingdom of Arracan, and the peninsula of Malacca. In 1819, it appeared in the isle of Penang, in Sumatra, Singapore, the kingdom of Siam, Ceylon, and the isles of France and Bourbon. During 1820, it reached Tonquin, Cambogia, Cochin-China, Southern China, Canton, the Philippines, &c. In 1821, it visited Java, Bantam, Madura, Borneo, and numerous other places in the Indian Archipelago. In the years 1822, 1823, and 1824, it appeared at Tonquin, Pekin, Central and Northern China, the Moluccas, Amboyna, Macassar, Assam, and various other Eastern countries and islands. During 1827, it prevailed in Chinese Tartary. In all these countries and places its prevalence and fatality were unprecedented in medical history.

“ In July, 1821, it reached, in its western course, Muscat in Arabia, and, during the remainder of the year, visited

various places in the Persian Gulf. In the following month it appeared in Persia, and during 1822 and 1823, 1829 and 1830, it prevailed in several of the principal cities of that empire. It broke out in Bussorah and Bagdad in July 1821, and in 1822 and 1823, ravaged most of the populous cities of Mesopotamia, Syria, and Judea.

“ In 1822 it reached to within 150 miles of the Georgian frontiers of Russia, and in 1823 appeared at Orenburg and Astrachan, beyond which it seems not to have extended until August 1828 and 1829, when it reappeared at Orenburg, the capital of the province of that name, situated on the Tartar frontier, about 400 miles north of the Caspian, and about 1000 miles north of the places where it prevailed extensively in 1822. Its prevalence and fatality in this province were, upwards of a tenth of the inhabitants having been seized, and about a fourth part of those attacked having died of it. At the same time that the disease appeared in Orenburg, it was raging in several Persian provinces and Tartar tribes in Central Asia, from which it was supposed to have been introduced into Orenburg. At the commencement of 1830, the disease had entirely ceased in the Russian dominions; but, towards the beginning of autumn, it broke out with increased violence on the Georgian frontier of Persia, having appeared, in June, in the Persian province of Ghilan, on the southern shore of the Caspian, from the various southern ports of which it extended northwards along the westward Caspian shore until it reached Baku, Tiflis, Astrachan, and numerous other towns, in its progress into the heart of the Russian empire. After attacking a number of places, it has continued to spread westward and northward through Russia, Poland, Moldavia, and Austria; visiting Moscow, Warsaw, and other places in Poland, and extending, in May 1831, to Riga and Dantzic, and in June and July, to St. Petersburg and Cronstadt; early in October, to Berlin and Vienna, and subsequently, to Hamburgh, &c.” At Sunderland, 24th October, 1831, and in London on 17th of January, 1832.

According to Sir William Russell and Sir David Barry, who were sent by the British government as medical com-

missioners to investigate cholera in Russia, the disease is in all essential points identical with the Indian malady, but is in some degree modified (Despatch to the Home Secretary of State, July 7, 1831). In subsequent despatches, the disease is considered contagious.

Dr. Hamett, the British medical commissioner sent to Dantzic, reports to the government the occurrence of 776 cases in different localities, in which there was no trace of contagion; and that 1932 persons, of all ages, besides many others, were shut up in cholera dwellings (for at least twenty days), during the first two months of the epidemic, and escaped the disease. Mr. Gisbone, our consul, declares the disease appeared at a time when it was not suspected to be within a hundred miles of Dantzic; and without there being the slightest trace or communication with any foreign means of infection. These reports were partly suppressed, as opposed to the Central Board of Health, of London, a body composed of Sir W. Pym, Sir W. Russell, Sir D. Barry and others, who were contagionists.—See *Hamett's Reports*, 1832.

But the Central Board of Health also comprised several members of the privy council, and, in consequence, an act of parliament was rapidly passed through both houses, declaring epidemic cholera contagious and of Asiatic origin; authorizing the establishment of parochial and local boards of health, and enforcing quarantine. The first effect of this act was to increase the number of contagionists, and to excite universal terror through this kingdom and the civilized world. Nevertheless, nine-tenths of the faculty, who were daily observing the disease, were non-contagionists. Several of their opponents joined them daily, and at length the whole profession were opposed to contagion, except those connected with boards of health.

The appearance of the disease at Sunderland was ascribed to importation from Hamburgh; but this was by no means proved, and the disease had appeared in the vicinity previously. It had appeared at Leeds, in 1825, as already stated. The first case that occurred in London was that of a soldier, of

the grenadier guards, named Webb (Jan. 17, 1832), who was seen by Dr. James Johnson, Dr. Gilkrest, and others, who had declared it cholera; but it was not admitted by the Central Board of Health, as it could not be traced to contagion. These gentlemen, with the surgeon and assistant surgeon of the regiment, have since publicly declared that Webb had as genuine cholera as any they had subsequently observed.

The official board decided that the first case occurred in February, in a man who had been scraping a Sunderland coal vessel on the Thames. But as this favoured the doctrine of importation, other cases were proved to have existed previously in the street in which the labourer in the coal smack had resided. The Medical Society of London, and the Westminster Medical Society, were at first divided, but soon became non-contagionists with scarcely an exception.

Cholera appeared first in Paris in March, and the physicians and surgeons of the Hôtel Dieu, after the most careful observation, declared that it was not contagious. The subscribers to this resolution were Petit, Husson, Magendie, Honore, Sanson, Gendrin, Recamier, Dupuytren, Breschet, Gueneau de Mussy, Cailiard Baillie, March 31st, 1832. The medical officers of the hospital St. Louis next agreed with their colleagues of the Hôtel Dieu, and formed a resolution to that effect, April 6th, which was signed Alibert, Biett, Emery, Jobert, Lugol, Monry, Gerdy, and Richerand. The officers of La Pitie arrive at the same conclusion, April 30th; Serres, Clement, Perent de Chatlet, Lisfranc, Louis, Andral, Bouillaud, and Velpeau. The Westminster Medical Society made a similar declaration, April 28th. Dr. Barker, the secretary to the Dublin Board of Health, declared that the disease was not imported into the Irish capital. The Edinburgh Board of Health advocated contagion; but Professor Lizars and Dr. Sanders, and most of the ablest practitioners, were strenuous non-contagionists. Notwithstanding the general, indeed the almost universal opinion that the disease was epidemic but non-contagious, still the contrary declaration of the govern-

ment Board of Health, aided by an act of parliament, had most influence with the public, and with foreign countries.

Quarantine was rigidly enforced in London and most of our ports; but the disease, like all epidemics, spread in despite of human intervention; and after our trade and commerce were most seriously injured, the disease being in full force, quarantine was abandoned. In the month of Nov. 1832, the Central Board of Health advised the hospitals to be thrown open to cholera patients.

SYMPTOMS.—Diarrhœa more or less intense, with feculent dejections at first, but speedily assuming the appearance of rice water or gruel, flying pains, or sense of coldness in the abdomen, as if purgative medicine was about to operate; countenance pale, no appetite, nervous agitation, diminished muscular power, nausea or vomiting, slight or severe cramps in the legs, arms, abdominal muscles, and loins; small, weak pulse, cold, clammy, or moist skin, and these symptoms varying in intensity, may appear successively or simultaneously. In some cases the patient is struck down almost lifeless; in others the disease steals on for eight or ten days. When it came on suddenly, in addition to the above symptoms, the cramps commenced in the fingers and toes, and rapidly extended to the trunk; the eyes were sunk, and surrounded by a dark circle; vomiting and purging of white coloured matters, mixed with flocculi; features contracted and sharpened, wild and confused expression of countenance. The face, extremities, and sometimes the whole surface of the body, assumed a leaden, bluish, or purplish hue, varying in the degree of intensity; the extremities were shrunk and contracted, nails blue, pulse thready or imperceptible at the wrist, arm, axilla, temple, or neck; skin cold and damp, a great restlessness; inexpressible pain in the epigastrium, loud moaning or groaning, incessant restlessness or jactitation, difficult, oppressed respiration; inspiration effected with great difficulty, expiration short and convulsive, voice plaintive or nearly suppressed, speech in a plaintive whisper; tongue white, cold, and flabby, temperature 88°; spasms passive or periodical, occasionally almost tetanic, or were replaced by a constant tremor. The

secretions of bile, saliva, tears, and urine, were entirely suppressed, and there was an earthy or cadaverous odour exhaled by the body. Death generally took place in from six to twenty-four hours.

PROGNOSIS.—*Favourable symptoms.*—In cases about to terminate favourably, re-action gradually takes place, and all the symptoms improve; the cramp ceases, the dejections contain bile, urine is secreted, the voice and pulse return, increase of animal heat in the extremities and surface of the body, improvement of countenance, circulation, respiration, and muscularity.

Unfavourable.—Delirium, sordes on the teeth, lips, and gums, increased prostration of the vital powers, coldness and blueness of the surface, collapsed countenance, small, irregular, and thready pulse, oppression and difficulty of respiration, involuntary evacuations, subsultus tendinum, convulsions—death.

Anatomical characters.—Congestion of the lungs and brain; blood black, oily, and dissolved, same in arteries and veins; brain and its membranes congested, serum in brain and spinal marrow; the abdomen, on being opened, often emits a fœtid odour; fluids, like those vomited and passed from the bowels, detected in the alimentary canal; flatus; intestinal mucous membrane covered with a tenacious substance, and of a dark or scarlet hue, either partially or generally; stomach and bowels paler than natural; gall ducts may or may not be contracted. The gall-bladder is much distended with viscid bile. The pancreas, spleen, and kidneys are in their ordinary state, or gorged with blood. The urinary bladder is always contracted and empty. The vena porta and all the large abdominal veins are loaded with black blood resembling tar in appearance. The brain and its membranes may be healthy or congested.

TREATMENT.—There is no disease for which such a variety of remedies was proposed, or in which all remedies so completely failed, as in the epidemic cholera of this year, 1832. After all that has been written on the subject, we know no remedy for the disease. Emetics, venesection, warm, hot air-

baths, exhausted air-bath, frietions, with all forms of stimulating liniments, internal stimulants as in the last stage of fever. See pp. 78, 86, 91, 114.

Saline medicines, see p. 94, saline injections into the veins, vapours and gases by inhalation, in immense quantities.

Mercury, galvanism, nitric acid applied to the nucha, actual cautery along the spine; large opiates, strychnine, acetate of lead, copious libations of cold water, were all employed with little, if any, success.]

DIARRHŒA.—LOOSENESS, OR PURGING.

SPECIES.—1. *Diarrhœa crapulosa*; the fæces discharged in a more liquid state than is natural, and in greater quantity.

2. *Diarrhœa biliosa*; a great quantity of yellow fæces discharged.

3. *Diarrhœa mucosa*; copious discharge of mucus.

4. *Diarrhœa cæliaca*; discharge of a milky humour like chyle.

5. *Diarrhœa lienteria*; the food without any material change quickly discharged.

6. *Diarrhœa hepatorrhœa*; discharge of a bloody matter like serum, without pain.

CHARACTER.—Frequent and copious discharges of a feculent matter by stool, accompanied by much griping; each dejection is usually preceded by a murmuring noise, and flatulence in the intestines, together with sense of weight and uneasiness in the lower belly, which cease on the discharge taking place, but are again renewed before the succeeding one ensues. There are frequently sickness, nausea, and vomiting; the countenance turns pale, sometimes sallow; thirst; dryness and bitterness of the mouth, and yellowness of the tongue, indicating the presence of bile in the alimentary canal; the skin is dry and rigid, and if the disease continue, great emaciation succeeds.

CAUSES.—*Remote*.—The application of cold to the surface of the body; perspiration suppressed by any cause; passions of the mind; acrid indigestible aliment; acid fruits; acidity generated in the stomach from a deficiency of bile; oily and putrid substances; the abuse of active purgatives; increased secretion of mucus from the mucous follicles of the intestines; erythematic inflammation; worms; retrocedent gout or rheumatism; diminished action of the absorbent vessels of the intestines.

Proximate.—Increased peristaltic motion of the intestines.

DIAGNOSIS.—*From dysentery*.—By being unattended either with inflammation, fever, contagion, or tenesmus; by the appearance of the matter evacuated; which in the one disease is feculent, or mixed with alimentary matter; in the other, sanguinous or putrid.

TREATMENT.—*Indications*.—1. To obviate or remove the morbid cause.

II. To suspend the inordinate action of the intestinal canal.

III. To restore the impaired tone of the parts.

Irritating causes are often lurking in the intestinal canal, and must be removed,

1. By a gentle emetic of ipecacuanha.

2. Aperients of rhubarb, magnesia, oleum ricini, or purging salts.

3. Diluents and demulcents; as the decoctum lini, decoctum hordei, decoctum hordei compositum, and the like.

4. Alkalis and absorbents.

5. Fomentations and sinapisms to the extremities, in cases of translated gout or rheumatism.

6. Anthelmintics; if the disease arise from worms.

7. Diaphoretics; if from suppressed perspiration; as the pulvis ipecacuanhæ compositus, or pulvis Jacobi, or antimonium tartarizatum, in small and frequent doses.

The inordinate action of the intestinal canal is suspended,

1. By opium, with cordial astringents.

R. Confectionis aromaticæ 3j ;
Tincturæ catechu f. 3j ;
Misturæ cretæ f. 3vj ;
Syrupi zingiberis f. 3ss ;
Tincturæ opii f. 3ss ;

Fiat mistura, cujus capiantur cochlearia duo vel tria post singulas sedes liquidas, concusso prius vitro.

R. Confectionis aromaticæ 3j ;
Tincturæ catechu f. 3j ;
Spiritus ammoniæ compositi f. 3ij ;
Aquæ cinnamomi f. 3vj ;
Syrupi zingiberis f. 3ss ;
Tincturæ opii ℥ xl ;

Fiat mistura, de qua sumantur cochlearia tria magna post singulas sedes liquidas.

R. Confectionis opii 3jss ;
Tincturæ kino f. 3j ;
Syrupi zingiberis f. 3ss ;
Misturæ cretæ f. 3vjss ;

Fiat mistura, ut priori capienda.

R. Confectionis opii gr. xxxvj ;
Olei caryophilli ℥ iv ;
Pulveris calumbæ q. s. ;

Fiant boli quatuor, quorum capiat æger unum omni trihorio.

R. Confectionis aromaticæ 3j ;
Pulveris acaciæ 3ss ;
Spiritus myristicæ f. 3j ;
Aquæ menthæ piperitæ f. 3vj ;
Syrupi zingiberis f. 3ss ;
Tincturæ opii f. 3ss ;

Fiat mistura, cujus sumantur cochlearia tria magna post unamquamque sedem mollem, vitro prius concusso.

2. Diaphoretics ; pulvis ipecacuanhæ compositus.

R. Pulveris ipecacuanhæ compositi gr. v ;
Misturæ cretæ f. 3xij ;
Spiritus cinnamomi f. 3ij ;
Syrupi papaveris f. 3j ;

Fiat haustus quarta quaque hora adhibendus.

3. Astringents ; especially kino, alumen, resina acaroides, hæmatoxylum, simarouba, liquor calcis, ulmus, lichen. [Cupri sulphas.—See Dysentery. The persesquinitrate of iron is

very strongly recommended by Mr. Kerr, in the Edinburgh and Glasgow Medical Journals. It has no place in any of the Pharmacopœias.—See *London Medical and Surgical Journal*, 1831.]

R. Aluminis purificati gr. x;
Confectionis rosæ gallicæ q. s.;
Fiat bolus bis terve die sumendus.

R. Acaroidis resinæ ʒij;
Mucilaginis acaciæ ʒss;
Tere simul, et gradatim adde
Aquæ menthæ piperitæ f ʒvj;
Tincturæ acaroidis resinæ f. ʒj;
Syrupi aurantii f. ʒss;
Sit dosis cochlearia tria magna quartâ quaque horâ vel
sæpius.

The resina acaroides is the Botany-bay gum; it is much esteemed by some, but is not in general use.

R. Kino gr. x;
Pulveris cretæ compositi cum opio gr. xv;
Syrupi papaveris q. s.;
Fiat bolus quartâ vel sextâ quaque horâ sumendus.

R. Catechu gr. xv;
Aluminis purificati gr. vj;
Confectionis rosæ gallicæ q. s.;
Fiat bolus ter in die sumendus.

R. Extracti hæmatoxyli ʒjss;
Misturæ cretæ f. ʒvj;
Tincturæ cardamomi f. ʒj;
Fiat mistura; cujus sit dosis cochlearia tria magna pro
re nata.

R. Extracti hæmatoxyli ʒj;
Olei cinnamomi m̄ vj;
Fiant boli sex, quorum capiat æger unum pro re nata.

R. Radicis simaroubæ contusæ ʒss;
Corticis granati contusi ʒij;
—— aurantii excisæ ʒiij;
Aquæ ferventis Oj;
Macera per horam, dein cola.

R. Hujus infusi f. ℥vij ;
 Confectionis aromaticæ 3j ;
 Tincturæ cardamomi compositi f. ℥ss ;
 Syrupi zingiberis f. ℥ss ;
 Tincturæ opii f. 3ss ;

Fiat mistura, cujus sumantur cochlearia tria magna ter quaterve die.

The third indication requires,

1. Tonics ; preparations of cinchona, [quinine,] cusparia, calumba, cascarilla, chalybeate waters.
2. Moderate exercise.
3. Light nutritive diet ; of lamb, chicken, &c.
4. The least acescent wines ; Madeira or sherry. Brandy and water should be substituted for malt liquors as common drink.

DIABETES.—IMMODERATE FLOW OF URINE.

SPECIES.—1. *Diabetes mellitus* ; with urine of the smell, colour, and taste of honey.

2. *Diabetes insipidus* ; with limpid urine, not sweet.

CHARACTER.—Frequent discharge of urine ; insipid in the one species, in the other, containing a large portion of saccharine and other matter, voided in a quantity far exceeding that of the aliment or fluid introduced ; continued thirst ; generally a voracious appetite ; impenetrably dry skin ; swelling of the legs ; gradual emaciation of the whole body ; hectic fever.

CAUSES. — *Predisposing*. — Constitutional weakness ; the decline of life ; preceding diseases, as hysteria, hypochondriasis, dyspepsia, asthma.

Exciting.—All those causes inducing debility of the system in general, and of the chylo-poietic organs in particular ; abuse of spirituous liquors ; cold applied to the body ; excess in venery ; immoderate evacuations ; crude farinaceous diet.

Proximate.—According to Drs. Dobson, Cullen, and Rollo,

it is an impaired action or morbid change in the natural powers of digestion and assimilation.

TREATMENT.—The following has been found most successful :

1. A diet consisting wholly of animal food ; abstaining rigidly from every kind of vegetable matter.

2. Emetics, exhibited occasionally.

3. Diaphoretics ; the pulvis ipecacuanhæ compositus, recommended by Dr. M'Cormack in the *Medical Commentaries* ; antimonial wine with opium, by Dr. Rollo.

4. Alkalis : soda-water ; hepatised ammonia, used by Dr. Rollo ; liquor ammoniæ ; sulphuretum potassæ. [Antimonial ointment, or warm baths, with an ounce of tartarized antimony in each, suggested by the fact, that the accidental occurrence of psora had cured the disease. Dr. Sharkey, of Cork, has succeeded with phosphate of soda.—*Dublin Medical Transactions*. Strychnine has been lately tried unsuccessfully.]

R. Liquoris ammoniæ ℥vj ;

Aquæ cinnamomi f.3v ;

—— destillatæ f.3x ;

Syrupi zingiberis f.3j ;

Fiat haustus ter in die sumendus.

R. Sulphureti potassæ gr. x ;

Conservæ rosæ q. s. ;

Fiat bolus ter in die sumendus.

R. Sulphureti potassæ gr. x ;

Syrupi zingiberis f.3ij ;

Aquæ cinnamomi f.3x ;

Fiat haustus ter in die sumendus.

5. Blisters and issues to the region of the kidney.

6. Astringents and tonics : alum, kino, catechu, sulphuric acid, nitric acid, lime-water, alum-whey, bark, myrrh, chalybeates, as directed for the cure of dyspepsia.

7. Opium, in large doses.

8. Tincture of the blistering fly ; Dr. Brisbane.

9. Covering the body with flannel, and the warm bath.

10. Anointing the skin with camphorated oil.

11. Keeping the bowels regularly open with aloes, soap, and bitters :—the pilula aloes composita.

12. Gentle exercise.

13. Frequent friction over the kidneys, by means of the flesh-brush or flannel, [or antimonial ointment.]

15. Chalybeate and sulphureous waters.

HYSTERIA.—HYSTERICIS.

SYMPTOMS.—The disease attacks by paroxysms or fits, generally preceded by yawning, stretching, dejection of spirits, anxiety of mind, effusion of tears, alternate flushings and paleness, difficulty of breathing, sickness at the stomach, palpitation of the heart, profusion of limpid urine; generally an acute pain in the left side, about the flexure of the colon, with sense of distention, giving the idea of a ball or globe rolling itself about in the abdomen, and gradually advancing upwards until it gets into the stomach; thence removing to the throat, it occasions, by its pressure, the sensation of an extraneous body lodged there, which is called *globus hystericus*. The disease having arrived at its height, the patient appears threatened with suffocation, she becomes faint, and is affected with stupor and insensibility; whilst at the same time the trunk of the body is turned to and fro, the limbs variously agitated, wild and irregular actions take place, in alternate fits of laughter, crying, and screaming, incoherent expressions are uttered, a temporary delirium prevails, and a frothy saliva is discharged from the mouth.—The spasms at length abating, a quantity of wind is evacuated upwards, with frequent sighing and sobbing; and the patient recovers the exercise of sense and motion, without retaining any recollection of what has taken place; feeling, however, a severe pain in her head, and a soreness over her whole body.

CAUSES.—*Predisposing*.—Female sex; generally the unmarried, and between the age of puberty and the thirty-fifth year; also attacks the more delicate of the male sex; peculiar irritability of the nervous system; studious and sedentary life; grief; anxiety of mind.

Exciting.—Excessive evacuations; suppression of the menses or lochia, or the neglect of usual discharges; great proclivity to venery; violent emotions of the mind; flatulent and aceseent regimen; former diseases which have greatly impaired the tone of the primæ viæ; imitation or sympathy.

Proximate.—A spasmodic affection of the uterus, according to Dr. Cullen; [cerebellic or spinal irritation, according to recent writers.—See *Tate on Hysteria*.]

DIAGNOSIS.—*From hypochondriasis.*—Hysteria attacks the sanguine and plethoric; comes on in early life; its attacks are sudden, and accompanied with the globus hystericus; it is diminished by time.—Hypochondriasis attacks the melancholic; comes on about the middle age; is gradual in its accession, and tedious in its progress; it increases as life advances.

From epilepsy.—By the preceding symptoms, especially the profusion of limpid urine; by the globus hystericus; by the convulsive motions in the one disease having the appearance of design; in the other obviously involuntary; by the laughing, crying, and other symptoms above mentioned.

PROGNOSIS.—Hysteria is seldom attended with danger, unless in a very impaired constitution, or in cases where the fits are extremely violent; when it sometimes passes into epilepsy, especially if there be a predisposition to that disease.

TREATMENT.—*Indications.*—I. To allay the spasmodic symptoms which constitute the fit.

II. To strengthen the nervous system during the intermissions of the paroxysms.

1. By bleeding; if the patient be young and plethoric, and the attack be recent; but in weak and debilitated constitutions, or when the disease is of long standing, it is inadmissible.

2. Stimuli applied to the nose; as, the liquor carbonatis ammoniæ, spiritus ammoniæ aromaticus, spiritus ammoniæ succinatus, liquor volatilis cornu cervi, burnt feathers.

3. Rubbing the temples with æther.

4. Pediluvium.

5. Dashing cold water over the extremities.

6. Clysters; simply laxative, or with asafœtida, castor, or opium; cold water alone has been effectual.

7. Antispasmodics, internally, if the patient can swallow; especially camphor, æther, ammonia, castor, asafœtida, opium, valerian. [Large doses of asafœtida, the best (Graves).]

8. Cupping or leeching the part of the spine which is pained on pressure or percussion, and afterwards rubbing it with antimonial ointment, until a copious eruption appears. We should pustulate about four inches of the spine at first, and continue the application to the whole extent.]

The second indication will be effected by:

1. Gentle evacuations from the primæ viæ.

2. By tonics; Peruvian bark, bitters, chalybeates, &c. such as are recommended against dyspepsia.

3. The occasional use of the antispasmodics above enumerated, [and emmenagogues, secale cornutum.—See Amenorrhœa.]

4. Regular exercise on horseback with variety of scene.

5. Cold bathing in common water or the sea.

6. Mineral waters; especially those of Cheltenham and similar springs.

7. The occasional spasms or cramps, to which hysteric women are subject, may be removed by the pediluvium, the warm bath, and by powerful antispasmodics, particularly opium, musk, æther, and camphor.

8. Cardialgia is relieved by an alkali; the liquor potassæ; liquor carbonatis ammoniæ; soda-water; the carbonates of that alkali, &c.—[See Pyrosis and Dyspepsia.]

HYDROPHOBIA.

SYMPTOMS.—At an uncertain time after a bite from a mad animal, mostly a dog or cat, sometimes not until several months have elapsed, wandering pains are felt in different parts of the body, restlessness, heaviness, disturbed sleep, with frightful dreams, sudden startings and spasmodic contractions, sighing, great anxiety, and dejection of spirits.

These symptoms increase; in some cases the bitten part becomes inflamed or painful: pains now attack the throat, and a sensation of suffocation occasionally takes place; an aversion is felt to the swallowing of water or other liquids; this arises to such a degree, that the moment any fluid is brought near the patient, or when the noise of the fluid is heard pouring out of any vessel, it occasions him to start with great dread and horror, and the attempt at deglutition is hurried and accompanied with a convulsive paroxysm.

Bilious vomitings sometimes take place; a considerable degree of fever follows, with dry and rough tongue; the voice becomes hoarse, and the patient is constantly spitting a viscid tenacious saliva; extreme anxiety comes on, and a degree of irritability beyond expression; the slightest motion, or sudden change of position, will excite a sensation of suffocation and convulsions; delirium in some instances takes place; convulsions now become frequent, and the patient dies exhausted or in a fit.

TREATMENT.—*Indications.*—I. To prevent the absorption of the poison.

II. To counteract its destructive effects, when already introduced into the system.

The first indication is frequently effected by surgeons, who remove the bitten part by excision, caustic, and other means.

The second indication is seldom fulfilled; various methods have been tried:—under an idea that the disease was inflammatory, the antiphlogistic plan has been strictly enforced; in which case the treatment is very like to that of inflammatory fever. Upon the idea that it was a nervous disease, antispasmodics have been resorted to; and then the remedies recommended against epilepsy are proper.—Mercury has its advocates, which is to be employed so as to excite a mercurial action in the system as soon as possible.

[Guaco has been lately tried unsuccessfully, though declared to be an effectual remedy by American writers. Belladonna, and injection of warm water into the veins, have also failed. There is no cure or effectual remedy for this disease as yet known.]

ORDER IV.

VESANIÆ.

CHARACTER.

Disorders of the judgment, without any pyrexia or coma.

GENERA.

AMENTIA, . . .	Fatuity.
MELANCHOLIA, . .	Melancholy.
MANIA, . . .	Furious madness.
ONEIRODYNIA, . .	Disturbed sleep.

MELANCHOLIA.—MELANCHOLY.

CHARACTER.—A partial chronic insanity, characterized by sadness, dejection of spirits, fondness for solitude, timidity, fickleness of temper, great watchfulness, flatulency, costiveness; delirium without fury, and unaccompanied by fever.—The mind pursues one certain object or train of thinking; which, in general, bears a near relation to the melancholic himself, or to his own affairs, creating the most groundless, yet anxious, fear, and generally accompanied with a desire of terminating his existence.

CAUSES.—Hereditary predisposition; powerful depressing passions of the mind; the melancholic temperament in an exquisite degree; anxiety; grief; love for an absent object; excessive evacuations; intemperance in the use of spirituous liquors.

DIAGNOSIS.—*From hypochondriasis.*—By the dyspeptic symptoms being much less, or entirely absent; by the mental derangement being more considerable, and amounting to the melancholic delirium above described.

PROGNOSIS.—*Favourable.*—The disease arising from accidental circumstances, and being of short duration; supervening fever; diarrhœa; cutaneous eruption; the mind still

capable of being diverted from its melancholy train of thought to other objects ; sound sleep.

Unfavourable.—The disease being the effect of hereditary predisposition, or of the melancholic temperament exquisitely formed ; its being of long standing ; supervening epilepsy or palsy.

TREATMENT.—Indication.—To interrupt the attention of the mind to its accustomed object.

By presenting an interesting variety of objects, and subjects of attention ; carefully guarding against the appearance of their being intentionally introduced.

By travelling ; by resorting to places of public amusement ; by the society of the gay and the convivial ; by exciting passions of a nature opposite to those that have prevailed during the disorder ; rousing the courage and resolution of the timid ; cheering the gloomy with merriment and pleasure ; while the violent and passionate should be restrained by fear.

By the introduction of sports and rural pastimes ; and likewise of such employment as consists in a moderate exercise of the faculties of the mind : thus the literati may be amused with philosophical questions ; the farmer with discourses on agriculture ; and the sailor with naval affairs.

By music of the more exhilarating kind.

The melancholic may be conducted to the different places of summer resort, under the pretext of drinking the waters which they afford.

MANIA.—FURIOUS MADNESS.

SYMPTOMS.—Delirium without fever ; severe pains in the head ; noise in the ears ; redness of the face ; peculiar wildness of the countenance ; rolling and glistening of the eyes ; grinding of the teeth ; loud roarings ; violent exertions of strength ; absurd incoherent discourse ; unaccountable malice to certain persons, particularly to their nearest relatives and friends ; a dislike to such places and scenes as formerly afforded particular pleasure ; a diminution of the irritability of the body

with respect to the morbid effects of cold, hunger, and watching; together with a full strong pulse.

Maniaes have frequently lucid intervals; are worse at the changes of the moon, and hence called lunatics.

CAUSES.—Hereditary predisposition; sanguineous temperament; violent and stimulating emotions of the mind; uncurbed and immoderate indulgence of any passion; violent exercise; frequent intoxication; sedentary life; abstruse study; suppression of periodical and other evacuations; excessive discharges; [parturition or lactation;] tumours compressing the brain; preceding attacks of epilepsy, fever, &c.

Proximate.—Increased and inordinate excitement of the sensorium.

DIAGNOSIS.—*From phrenitis*.—By the latter being accompanied with fever, the former not.

PROGNOSIS.—*Favourable*.—The mania arising in consequence of some other disease; the attacks being slight, and not frequent in their recurrence; hæmorrhage; diarrhœa; seabby angry eruptions; hæmorrhoidal or menstrual discharge; supervening fever.

TREATMENT.—*Indications*.—I. To gain a perfect command over the maniac.

II. To diminish the preternatural action of the brain.

The first indication is sometimes to be effected by gentle and conciliating treatment; but more frequently by inspiring him with awe and dread by coercion; tempered, however, with proper mildness and humanity; upon gaining the confidence of the maniac will in great measure depend the success of the after-treatment.

The second indication is sometimes fulfilled by,

1. Engaging the patient in some exercise or pursuit, that will employ at once both the body and the mind; and thus divert the latter from pursuing one invariable train of thought; removing him from those objects with which he was formerly acquainted; frequent change of scene; a spare and low diet.

2. By bleeding; if he be of a plethoric habit, and the attack recent.

3. Purgings; the drastic and the cooling purgatives have both been recommended—perhaps the former are preferable; hellebore, senna, jalap, gratiola.

4. Emetics of sulphate of zinc, or antimonium tartarizatum.

5. Cold bath. Many cases are related of the success of this remedy in various publications.

6. Sedatives; as conium; hyoscyamus, or the union of these with camphor; digitalis. Opium has in general been found prejudicial; opiate friction has, however, been successfully used by Dr. Chiarugi of Florence.

7. Nauseating medicines; as antimonium tartarizatum, in small and frequent doses.

8. Blisters to the head; setons or issues in the neck.

9. Should madness be the consequence of great debility, as sometimes happens at the close of fever, the opposite of the above treatment will be required; as, a nutritive and restorative diet; Peruvian bark, and other bitters; chalybeates, &c.

10. All cases that seem to be connected with scrofulous disease, syphilis, or cutaneous eruptions, should be attacked by a long course of antiscrofulous and antivenereal medicines.

[According to the received opinion of the profession, we should not grant a certificate for the committal of an insane person to an asylum, unless he threatens violence to himself or others.—*Connolly*. It is impossible to comprehend what the law considers insanity, “for it is neither lunacy, idiocy, imbecility, or incompetency to manage affairs.”—*Amos*. See *Ryan’s Manual of Medical Jurisprudence*, 1831. Dr. Haslam maintained, in Bagster’s case, that he considered that no person’s mind was sound, unless that of the Deity. This confirms the adage,—“*Nemo mortalium omnibus horis sapit*.”]

Puerperal mania is a nervous disorder which continues for a longer or shorter duration, is sometimes intermittent, and generally terminates in health. It rarely proves fatal.]

CLASS III.

CACHEXIÆ;

OR,

DISEASES FROM DEPRAVED HABIT.

CHARACTER.

Depraved habit of the whole, or of a great part, of the body, without any primary febrile or nervous affection.

ORDERS:

- | | |
|--------------------|--------------|
| I. MARCORES, | EMACIATIONS. |
| II. INTUMESCENTIÆ, | SWELLINGS. |
| III. IMPETIGINES. | |

ORDER I.

MARCORES.

The genera of this order are characterised by a wasting of the body.

GENERA.

PHTHISIS,	or	Pulmonary consumption.
TABES,	—	Wasting away with fever.
ATROPHIA,	—	Emaciation without fever. .

PHTHISIS.—PULMONARY CONSUMPTION.

SYMPTOMS.—Regular tubercular phthisis usually begins with a short dry cough, so slight as to become habitual before it excites the attention of the patient. The breathing is more easily hurried by bodily motion; the patient becomes languid and indolent, and gradually loses strength; the pulse is small,

soft, and quicker than usual; at length, from some fresh exciting cause, the cough becomes more considerable, and is particularly troublesome during the night; the breathing more anxious; sense of straitness and oppression of the chest is experienced; an expectoration takes place, at first of a frothy mucus, and is most considerable in the morning; afterwards becoming more copious, viscid, and opaque.

The breathing becomes more and more difficult; the emaciation and weakness go on increasing; a pain arises in some part of the thorax, at first generally referred to the sternum, but as the disease advances is felt on one or both sides, is increased by coughing, and sometimes becomes so acute as to prevent the patient from lying upon the affected side.

The face now begins to flush; the pulse becomes quick and hard; the urine is high-coloured, and deposits a branny sediment; the palms of the hands, and soles of the feet, are affected with burning heat; the tongue, from being white, is now preternaturally clean and red; purulent matter is expectorated; all the symptoms are increased towards the evening; the fever assumes the hectic form; having an exacerbation twice in the day; the first about noon, which is inconsiderable, and soon suffers a remission; the other in the evening, which gradually increases until after midnight. Each exacerbation is usually preceded by chilliness, and terminates in profuse perspiration, and the deposit of a furfuraceous sediment in the urine.

The appetite now often mends, and generally becomes better than in the first stages of the complaint; the sclerotic membrane of the eye assumes a pearly white colour; during the exacerbations, a circumscribed redness appears on each cheek, but at other times the face is pale, and the countenance dejected; food is returned by vomiting; a diarrhoea comes on, and generally alternates with colliquative sweats; the emaciation is extreme; the countenance assumes a cadaverous appearance; the cheeks are prominent; the eyes hollow and languid; the hair falls off; the nails are of a livid colour, and much incurvated; the legs swell, and are œdematous; aphthæ appear in the throat; still the appetite often remains entire,

and the patient flatters himself with the hopes of speedy recovery, and is often vainly forming distant projects of interest or amusement, when death puts a period to his existence.

CAUSES.—Predisposing.—Hereditary predisposition; particular formation of the body; marked by long neck, prominent shoulders, narrow chest, and long slender fingers; the sanguineous temperament; constitutional irritability of the lungs; sedentary life; the scrofulous diathesis; indicated by a fine clear skin, fair hair, delicate rosy complexion, large veins, thick upper lip, weak voice, and great sensibility.

Exciting.—Certain preceding diseases; as hæmoptysis, pneumonia, catarrh, asthma, serofula, syphilis, variola, rubeola. The dust to which certain artificers are exposed; as needle-pointers, stone-cutters, millers, &c. The fumes of certain metals or minerals; violent and depressing passions of the mind, as grief, disappointment, anxiety; intemperance of any kind; profuse evacuations, as diarrhœa, diabetes, fluor albus, menorrhagia; continuing to suckle too long under a debilitated state; the application of cold united to moisture; as the lying in damp beds, sudden exposure to cold when the body is preternaturally warm, especially if made so by previous exertion.

Proximate.—The formation of tubercles, which inflame, suppurate, and become [vomicæ, abscesses and] ulcers, communicating with the bronchia.

DIAGNOSIS.—The infallible characteristics of confirmed phthisis are the hectic fever, with its peculiar concomitants above described; the purulent expectoration; from which we infer an ulcerated state of the lungs. [Hectic fever is not an infallible sign of phthisis: recovery may happen though this be present.]

Distinction between Pus and Mucus.

The former is opaque, friable, easily miscible with water, of a foetid odour, of greater specific gravity than water, sinking to the bottom of the vessel containing this fluid.

Its colour is either white, yellow, or green; when dissolved in sulphuric acid, if water be added, it either falls to the

bottom, or forms an intimate mixture; making the whole uniformly turbid.

The latter is transparent, viscid, not miscible with water, inodorous; upon adding water to its solution in sulphuric acid, it separates into flocculi, and floats upon the surface.

A sputum, which answers to all the characters of pus, is occasionally expectorated from an inflamed state of the mucous membrane of the air passages, and from other conditions, not attended by ulceration. To ascertain whether ulceration exists, M. Laennec, an ingenious, experienced, and skilful physician of Paris, has invented an instrument, by the application of which to the thorax, he can tell whether the lungs are ulcerated or not. This instrument he calls *stethoscope*. M. Laennec considers a peculiar sound of the voice as indicative of an ulcerated or preternatural cavity in the lungs, which he calls *pectoriloquism*. [See Auscultation, p. 41.]

PROGNOSIS.—Circumstances more especially *unfavourable* are, the disease arising in consequence of hereditary predisposition; from tubercles; high degree of hectic fever; great emaciation and debility; a morbidly clean or fiery red tongue; fixed pain in the chest; colliquative sweats; expectoration of pure pus; œdema of the legs; diarrhœa; aphthæ. [Sore throat, anomalous symptoms in every part of the body.]

TREATMENT.—*Indications.*—To lessen inflammation in the inflammatory stage; and to promote the healing of ulcers after suppuration has taken place.

1. By small and repeated bleedings; regulated by the strength of the patient and the period of the disease, unless the disease bear more evident marks of a scrofulous tendency.

2. Gentle laxatives, of cassia, manna, Rochelle salt, &c.

3. Mild diaphoretics, of the liquor acetatis ammoniæ, or pulvis ipecacuanhæ compositus.

4. The occasional exhibition of an emetic: the sulphate of zinc is preferred; and the sulphate of copper is recommended by Senter, in the Transactions of the College of Philadelphia; and by Adair, in the Medical Commentaries.

5. Sponging the chest daily with dilute acetic acid, in the proportion of one part acid to three of water.

6. Blisters, issues, or setons, [or antimonial pustulation] opposite to the part affected with pain, are sometimes serviceable.

7. Nitre, in small and frequent doses.

8. Inhaling the vapour of hot water, alone, or impregnated with æther, conium, nicotiana, digitalis, stramonium, [iodine or chlorine.]

9. By inhaling certain factitious airs: Dr. Beddoes, and other pneumatic physicians, recommend dilute hydrogen, and hydro-carbonate; but they, like the other remedies, are seldom beneficial.

10. Inhaling the vapour of tar; first suggested by Mudge in his Treatise on the Inhalation of Steam, and lately introduced by Crichton, Lazaretto, Hufeland, Neuman. The best way of using it is to boil some tar, such as is used for the navy and by cable manufacturers, for a few minutes in the open air, and then to add from one to two ounces of sub-carbonate of potass, dissolved in a little water, to each pound, and to place this mixture over a spirit lamp in the sick room, keeping up a heat which disengages the volatile part of the tar. If a white vapour arises, the heat is too strong or the tar impure. The air of the chamber soon becomes impregnated with the vapour of the tar, which is invisible. This process should be repeated two or three times a day for half an hour each time, taking care not to alter that temperature of the room which is the best for the patient. The same tar may be used until it becomes thick.

[M. Gannal of Paris has related several cases of well marked consumption which were cured by the inhalation of chlorine gas (see his work translated by Potter); and Dr. Murray of Dublin had proposed iodine vapour in 1829, and Sir Charles Scudamore in 1830. The latter is useless, the former affords benefit, but sometimes fails.

Were it possible to detect tubercles before suppuration, it is extremely probable that iodine might produce their absorption as it does of an immense number of glandular and other tumours. But when the lung is studded with vomiceæ or abscesses, and those unbroken, it can scarcely be expected that any vapour will effect a cure. Pneumatic medicines are

unjustly depreciated, though their application is direct to the bronchial mucous membrane.]

11. Conium; beginning with small doses, and gradually increasing it.

12. By digitalis; in the praise of which Drs. Beddoes, Drake, Fowler, and others, have written. It is sometimes serviceable, more frequently otherwise. The tincture is the best preparation; the dose should be small at first, from five to ten minims, and it should be gradually increased until it reduce the energy and frequency of the pulse.

13. Tonics and chalybeates have been administered with advantage; particularly myrrh alone, or with sulphate of iron: the *mistura ferri composita*.

14. The *phellandrium aquaticum* is praised by Drs. Hertz and Michaelis, in *Hufeland's Journal*.

15. The *agaricus piperatus* and *deliciosus*, by Dr. Dufresnoy.

16. Colliquative sweats should be checked by vegetable and mineral acids. [The sulphuric aromatic acid, muriated tincture of iron, and the *tinctura styptica* are the best.]

17. *Diarrhœa*, by the *mistura cretæ cum opio*; *resina acaroidis*; or by diaphoretics. See *Diarrhœa*.

18. The cough, by opiates, [hydrocyanic acid, *hyosciamus*, conium], especially the *syrupus papaveris*; and by demulcents. See *Catarrhus*.

19. A light and nutritive diet, [so as not to cause excitement], the farinaceous vegetables; milk, especially that of the ass; acescent fruits; the lichen *islandicus*, or Carrageen moss, boiled with milk; the different kinds of shell fish; are most esteemed for the general diet. [Life will be prolonged by nutritious aliment.]

20. Removal to a warm climate; to Lisbon, to Madeira, to the south of France, or to the more temperate parts of our own country. Moderate exercise, either by swinging, on horseback, or by sailing; carefully guarding against a suppression of cutaneous perspiration, in consequence of the application of cold, by constantly wearing flannel next to the skin; a sea voyage; Bristol and Seltzer waters; stabling with

cows. [Laennec, Stokes, and others, maintain that consumption is curable when the disease is confined to a single spot in the lung. Autopsies have shown cicatrization where the stethoscope had previously detected cavities. Phthisical persons should avoid loud speaking, playing on wind instruments, and crowded assemblies.

All the functions decline on account of the defective arterialization of the blood in the lungs, and unless white meats, jellies, and light nutritive aliment be allowed, the patient will sink rapidly. This failure of the functions accounts for the suppression of the catamenia, which is the effect and not the cause of the disease as women generally imagine. Emmenagogues fail to produce effect. Sometimes we discover pulmonary congestion, when a small bleeding or leeching must be employed. Quinine is advised by Martinet when hectic is present, and a friend assures the writer that colliquative sweats are arrested by an old remedy, the *tinctura styptica*, composed of 3j of calcined sulphate of iron and two pints of French brandy. Dr. Armstrong spoke in favour of severe counter-irritation on the chest. In some cases this is prejudicial, and produces much constitutional disturbance.]

TABES AND ATROPHIA.

Both these genera are characterized by wasting away of the body. The distinction between them is, that in *tabes* there is hectic fever, which does not accompany *atrophia*: both are symptomatic of some internal disease, which in children is generally obstructed mesenteric glands, from scrofula or overloaded bowels; these require the medicines which are recommended for scrofula and constipation.

Atrophy sometimes occurs in adults and in old age, when no internal disease can be detected. In such cases, the following plans may be resorted to.

1. A course of sarsaparilla: the simple decoction should be given in the dose of a pint daily for a month or six weeks,

when its strength should be increased for as long a period. A vegetable and milk diet assists this medicine.

2. Sarsaparilla and bitter-sweet. Some instances of atrophy have been cured by this compound, which seemed connected with the sudden disappearance of an eruption from the skin that had existed many years.

R. Stipitum dulcamaræ recentium concisarum ʒjss;
Decocti sarsaparillæ Oj;

Coque per quadrantem horæ, dein cola. Sumat æger cochlearia octo ter quotidie.

3. Bitters and tonics, with ammonia: when the wasting away appears connected with imperfect or impaired digestion, this class of remedies should be tried. The best formulæ are given under the head of Dyspepsia.

4. Mercurial alteratives:—Plummer's alterative pill, or the pilula submuriatis hydrargyri, every night; or two or three grains of the pilula hydrargyri, or the hydrargyrus cum creta, in small doses. [The editor has found iodine almost infallible in this disease in children.

R. Hydrargyri cum creta gr. xij;
Pulveris rhei ʒi—ʒss;
—— aromatici gr. x;
Sacchari purificati ʒj;

In chartulas sex divide ex quibus capiat infans unam mane nocteque nisi alvus nimis soluta sit.

R. Syrupi simplicis ʒiiss;
Tincturæ iodinæ ℥iij—v;

Fiat syrupus de quo sumatur cochleare parvum bis in die.

The diet should be highly nutritious, as animal and vegetable jellies, sago, arrow-root, &c. See Rachitism and Scrofula.]

ORDER II.

INTUMESCENTIÆ.

CHARACTER.

External tumour of the whole, or of the greater part of the body.

GENERA.

Adipose Swellings.

POLYSARCIA, . . . Obesity.

Flatulent Swellings.

PNEUMATOSIS, . . . Windy swelling.

TYMPANITES, . . . Drum belly.

PHYSOMETRA, . . . Physometra.

Dropsies.

ANASARCA, . . . Dropsy of the flesh.

HYDROCEPHALUS, . . . Water in the head.

HYDRORACHITIS, . . . Water in the spine.

HYDROTHORAX, . . . Water in the chest.

ASCITES, . . . Dropsy of the abdomen.

HYDROMETRA, . . . Dropsy of the womb.

HYCROCELE, . . . Dropsy of the testicle.

Swellings of the Solids.

PHYSCONIA, . . . Physeonia.

RACHITIS, . . . Rickets.

POLYSARCIA.—OBESITY.

This disease is characterised by excessive corpulency, which depends on an increase of fat or oil in the cellular texture of the body.

The treatment consists in diminishing the quantity of nutritious matter, and increasing the excretion by exercise and purging.

PNEUMATOSIS, OR EMPHYSEMA.

This disease consists in a collection of air in the cellular membrane. It is in general confined to one place; but, in a few cases, spreads universally over the whole body, and occasions a considerable degree of swelling. It is attended with an evident crackling noise and elasticity, upon pressure; and, when near the chest, with much difficulty of breathing, oppression, and anxiety.

CAUSES.—Wounds of the lungs. It sometimes arises spontaneously, or comes on immediately after delivery, without any evident cause.

TREATMENT.—The air is to be evacuated by scarifications into the cellular membrane, assisted by proper pressure with the hand. Violent dyspnœa and anxiety are to be relieved by bleeding and laxatives; and the pain and uneasiness arising from distention, by relaxing applications to the skin, as the unguentum cetaeei.

TYMPANITES.—DRUM BELLY.

SPECIES.—1. *Tympanites abdominalis*; or collection of air in the cavity of the peritoneum.

2. *Tympanites intestinalis*; or collection of air in the cavity of the intestines.

SYMPTOMS.—*Of the tympanites intestinalis*.—The disease sometimes comes on suddenly; at others it is more slow in its progress, and preceded by unusual flatulency, borborigmus, and a frequent expulsion of air upwards and downwards, attended with colic pains; the abdomen becomes considerably distended, tense, and elastic; costiveness; dysuria, and in some instances even ischuria; impaired appetite; thirst, heat, emaciation, hectic fever, not unfrequently dropsy or gangrene.

Of the tympanites abdominalis.—The swelling is more equal than in the former species; the tension greater; it is more elastic; and, upon percussion, sounds like a drum or bladder filled with air. There are no emissions of flatus.

CAUSES.—Loss of tone in the intestinal canal; errors in diet; abuse of spirituous liquors; suppression of customary evacuations; a crude vegetable aliment; hysteria; gangrene.

DIAGNOSIS.—*From ascites*.—By the absence of fluctuation, and of those symptoms which characterize the hydropic diathesis.—See Ascites.

PROGNOSIS.—*Favourable*.—An unimpaired constitution; the air contained within the cavity of the intestines, is more favourable than when it is accumulated within the cavity of the peritoneum; explosions of flatus.

Unfavourable.—The disease being of long standing; great debility; emaciation; difficult respiration; cough; hectic fever. The abdominal species mostly proves fatal.

TREATMENT.—*Indications*.—I. To evacuate the air.

II. To prevent its again accumulating.

To fulfil the first indication, recourse must be had to,

1. Antispasmodics and carminatives; opium, æther, oleum anisi, asafoetida, radix armoraciæ [tinctura, capsici, cardamoms, ginger, oil of turpentine. See p. 95].

R. Spiritus ætheris sulphurici compositi f. 3iij;
Misturæ camphoræ f. 3vij;
Syrupi zingiberis f. 3ss;
Tincturæ camphoræ compositæ f. 3ss;

Fiat mistura, cujus sumantur cochlearia tria magna quartâ quaque horâ.

R. Olei anisi ℥ xij;
Pulveris acaciæ ʒiv;
Syrupi rosæ f. 3ss;
Aquæ anisi f. 3vij;

Fiat mistura, cujus sumat æger cochlearia duo magna urgenti dolore vel flatû.

R. Asafoetidæ gr. vj;
Pulveris rhæi gr. iv;
Olei anisi ℥ ij;

Fiant pilulæ duæ quartâ vel sextâ quaque horâ sumendæ.

R. Pilulæ saponis cum opio gr. iij;
Pulveris capsici gr. iij;
Olei fœniculi ℥ ij;

Fiat pilula sextâ quaque horâ sumenda.

2. Warm purgative medicines and clysters.

R. Pilulæ aloes cum myrrha gr. vj ;
Pulveris baccae capsici gr. iij ;

Fiant pilulæ duæ.

R. Extracti colocynthis compositi gr. vj,
Pilulæ galbani compositæ gr. iij ;
Olei carui ℥ ij ;

Fiant pilulæ duæ.

R. Pulveris aloes compositi gr. viij ;
Olei anisi ℥ ij ;

Fiant pilulæ duæ.

R. Infusi rhei f 3x ;
Tincturæ cardamomi compositæ,
Syrupi aurantii, aa f. 3j ;
Tincturæ capsici ℥ v ;

Fiat haustus bis terve dic capiendus.

R. Tincturæ sennæ f. 3j ;
Vini aloes f. 3ij ;
Aquæ menthæ piperitæ f. 3iij ;
Syrupi zingiberis f. 3j ;

Misce ; cujus capiantur cochlearia duo pro re nata.

R. Potassæ tartratis 3ss ;
Infusi sennæ f. 3vss ;
Tincturæ ejusdem f. 3jss ;
Syrupi zingiberis f. 3ss ;

Fiat mistura, cujus sumantur cochlearia tria pro dosi.

R. Seminis fœniculi contusi 3iij ;
Aquæ ferventis f. 3xvj ;

Macera per horam, dein cola pro enemate.

R. Infusi fœniculi f. 3xij ;
Tincturæ asafœtidæ f. 3ss ;

Fiat enema.

3. The application of cold to the abdomen, of ice or snow, or of warm stimulating plasters.

R. Olei macis f. 3ss ;
Cerati saponis 3ij ;

Fiat emplastrum toto abdomini imponendum.

R. Extracti conii 3ij ;
Olei anisi f. 3ss ;

Fiat emplastrum.

4. Friction with warm stimulating liniments.

R. Camphoræ ʒij;
 Olei olivæ f. ʒj;
 — terebinthinæ rectificati f. ʒss;

Fiat embrocatio.

R. Olei cajuputæ f. ʒj;
 — terebinthinæ rectificati f. ʒij;

Fiat embrocatio.

5. Encircling the abdomen with a tight bandage.

6. In the tympanites intestinorum, advantage is occasionally obtained by the introduction of a fistula into the rectum, and suffering it to remain for some time.

7. In the other species, paracentesis with a very small trochar or lancet has been recommended.

The second indication requires,

1. Tonics; such as are recommended against dyspepsia.
2. Regular exercise.
3. Carefully avoiding all food of a flatulent nature.
4. The occasional use of stomachic aperients.

ANASARCA.—DROPSY OF THE FLESH.

CHARACTER.—A preternatural collection of serous or watery fluid in the cellular membrane of the whole or part of the body.

SYMPTOMS.—The disease generally commences in the lower extremities, and first shows itself towards evening with a swelling of the feet and ankles, which by degrees ascends, and successively occupies the thighs and trunk of the body. When it has become very general, the viscera are affected in a similar way; the cellular membrane of the lungs partakes the affection; the breathing becomes difficult, and is accompanied by cough, and the expectoration of a watery fluid. The urine is small in quantity, high coloured, and deposits a reddish sediment; sometimes, however, it is of a pale whey colour, and more copious. Costiveness; insatiable thirst;

the skin is generally pale and arid, though sometimes a slight yet general inflammation takes place, when it become tense and shining. The water often oozes through the pores of the cuticle, or raises it in the form of small blisters; the countenance becomes sallow; torpor; heaviness; troublesome cough; slow fever.

CAUSES.—Predisposing.—An hydropic diathesis, which is known by a loose flabby fibre, pallid and bloated countenance, the phlegmatic temperament, and scanty secretion of urine.

Exciting.—Certain organic diseases, producing an obstruction to the free circulation of the blood; excessive discharges; suppression of customary evacuations; exposure to a moist atmosphere; the sudden striking in of eruptive complaints; crude and indigestible aliment; drinking large quantities of watery fluids; abuse of spirituous liquors; certain preceeding diseases, as inflammation, the exanthemata, especially scarlatina, jaundice, diarrhœa, dysentery, phthisis, gout, intermittents of long standing.

Proximate.—Increased effusion; diminished absorption, or both united [according to others, there is increased action in the capillaries].

DIAGNOSIS.—From emphysema.—By the swelling in anasarca being œdematous; in emphysema, elastic and accompanied with crepitus; by the particular state of the urine; and other symptoms above mentioned.

PROGNOSIS.—Favourable.—The disease having been induced by causes which admit of easy removal; the strength little diminished; the constitution of the patient previously unimpaired; the appetite remaining entire; the respiration free; no great thirst; a gentle moisture on the skin.

Unfavourable.—Concomitant organic disease; great emaciation; erysipelatous inflammation; much drowsiness; petechiæ and ecchymoses; hæmorrhage; feverish heat; great thirst; quick small pulse.

TREATMENT.—Indications.—I. To evacuate the collected fluid.

II. To prevent its again accumulating.

The collected fluid is evacuated by,

1. Scarifications and punctures.
2. Blisters [antimonial ointment.]
3. Friction.

4. Emetics and nauseating medicines, especially antimonium tartarizatum and squills.

5. Cathartics; of elaterium, gamboge, croton oil, jalap, colocynth, submuriate of mercury, gratiola, crystals of tartar.

R. Extracti elaterii gr. ij;

Sacchari purificati 3j;

Optime terantur simul, dein in pulveres octo æquales dividantur, quorum capiat æger unum omni horæ quadrante donec adsit catharsis.

R. Extracti colocynthidis compositi,

———— jalapæ, āā 3j;

Gambogiæ ℥ss;

Olei juniperi ℥ iv;

Fiant pilulæ xij. quarum capiantur tres omni hora donec alvus ter quaterve respondeat.

[R. Pulveris jalapæ compositi 3vj;

Hydrargyri submuriatis

Pulveris digitalis

———— scillæ

———— antimonialis

———— cinnamomi compositi

} āā gr. xij;

} āā gr. x;

In chartulas xij. divide capiat unam mane nocteque nisi alvus nimis soluta sit.

The free use of imperial, or a solution of supertartrate of potass is also highly useful. See p. 70.]

R. Pulveris scammoniae compositi ℥ss;

Hydrargyri submuriatis gr. v;

Fiat pulvis catharticus.

R. Extracti gratiolæ gr. xv;

Tincturæ sennæ f. 3ij;

Infusi sennæ f. 3xj;

Syrupi zingiberis f. 3ij;

Potassæ sulphatis ℥j;

Fiat haustus catharticus.

R. Herbæ gratiolæ incisæ \mathfrak{z} ij;
 Foliorum sennæ \mathfrak{z} jss;
 Extracti glycyrrhizæ \mathfrak{z} ij;
 Electuarii cassiæ \mathfrak{z} ij;
 Aquæ destillatæ \mathcal{O} jss;

Leniter coque per quadrantem horæ, addendo sub finem coctionis,

Myrrhæ optimæ f. \mathfrak{z} j;
 Potassæ sulphatis \mathfrak{z} jss;

Cola pro usu: et sumat æger cyathum parvum pro re nata.

R. Potassæ supertartratis \mathfrak{z} ij;
 Pulveris zingiberis \mathfrak{z} j;
 Syrupi ejusdem q. s.;

Fiat electuarium molle, de quo capiat æger cochleare minimum ter quaterve in horas donec alvus copiose respondeat.

6. Diuretics; of colchicum, scilla, acetas potassæ, digitalis, supertartras potassæ, spiritus ætheris nitrici, cantharis, juniperis, armoracia, sinapis, genista, lactuca virosa, tabacum.

R. Tincturæ colchici f. \mathfrak{z} ss;
 Syrupi aurantii f. \mathfrak{z} jss;

Fiat syrupus, cujus sumat æger cochleare minimum omni bihorio, vel subinde, donec nauseam promoveat.

[The vinum colchici is a better formula.]

R. Pilulæ scillæ gr. vj;
 ——— hydrargyri gr. ijss;

Fiant pilulæ duæ nocte maneque capiendæ.

R. Pulveris digitalis gr. j—ij;
 Hydrargyri submuriatis gr. $\frac{1}{4}$ —ss;
 Pilulæ scillæ gr. vj;

Fiat bolus ter in dies adhibendus.

R. Infusi armoraciæ compositi f. \mathfrak{z} xij;
 Spiritus ætheris nitrici f. \mathfrak{z} j;
 Syrupi aurantii f. \mathfrak{z} j;

Fiat haustus ter in die sumendus.

R. Tincturæ scillæ \mathfrak{m} xx;
 Potassæ subcarbonatis gr. vj;
 Misturæ camphoræ f. \mathfrak{z} xij;
 Syrupi zingiberis f. \mathfrak{z} j;

Fiat haustus ter in die sumendus.

R. Potassæ acetatis ʒj;
 Infusi quassiae f.3xij;
 Tincturæ digitalis m x;

Fiat haustus ter in die capiendus.

R. Potassæ subcarbonatis ʒj;
 Acidi aceticis ferventis q. s. ad saturationem
 alkali:
 Misturæ camphoræ f.3x;
 Tincturæ digitalis m x;
 Syrupi zingiberis f.3j;

Fiat haustus ter in die sumendus.

R. Potassæ supertartratis ʒj;
 ————— sulphatis gr. x;
 Pulveris rhei gr. v;

Fiat pulvis ter in die sumendus.

R. Tincturæ cantharidis m xxx;
 Spiritûs ætheris nitrici f.3j;
 Misturæ camphoræ f.3xij;
 Syrupi zingiberis f.3j;

Fiat haustus ter in die sumendus.

R. Tincturæ nicotianæ m x—xxx;
 Infusi gentianæ compositi f.3vj;
 Aquæ pimentæ f.3x;

Fiat haustus ter in die sumendus.

R. Extracti lactucæ virosæ gr. x;
 Fiant pilulæ duæ ter in die capiendæ.

R. Extracti lactucæ virosæ ʒjss;
 Infusi gentianæ compositi f.3x;
 Aquæ menthæ piperitæ f.3iv;
 Spiritûs juniperi compositi f.3j;

Fiat haustus ter in die sumendus.

R. Radicis armoraciæ excisæ ʒij;
 Seminis sinapis ʒjss;
 Baccæ juniperi contusæ ʒiij;
 Vini albi Hispanici Oijj;

Digere per dies octo, dein cola:—capiat æger cyathum
 parvum vinosum bis quotidie.

7. Diaphoretics; compound powder of ipecacuanha, camphor, antimonials assisted by tepid diluents; the vapour bath; the copious use of aqueous diluents; water impregnated with tinctura ferri muriatis.

8. Bandages round the legs and abdomen.

9. Mercury; so exhibited as just to affect the gums.

The second indication demands,

1. A light nourishing diet, with pungent aromatic vegetables; garlic, mustard, onions, cresses; Rhenish wine.

2. Tonics; cinchona, cascarilla, cusparia, quassia, preparations of steel, as recommended for dyspepsia.

3. The occasional use of diuretics and aromatics.

4. Regular exercise.

5. Cold bathing.

ASCITES.—DROPSY OF THE ABDOMEN.

SPECIES.—1. *Ascites abdominalis*:—with equal tumour of the whole abdomen, and with evident fluctuation.

2. *Ascites saccatus*:—with partial swelling of the abdomen, at least at the beginning, and with fluctuation not so evident.

SYMPTOMS.—*Of the peritoneal*.—It often comes on with loss of appetite; sluggishness; inactivity; dryness of the skin; oppression of the chest; cough; diminished urine; costiveness; shortly after a protuberance is perceived in the hypogastrium, which gradually extending, at length occupies the whole abdomen, which uniformly becomes swelled and tense, in a small degree elastic, and communicates to the hand, when struck against it, the sensation of its containing an undulating fluid.

As the distention increases, the difficulty of breathing becomes more considerable; the countenance exhibits a pale or bloated appearance; immoderate thirst; dry parched skin; high-coloured, thick, and scanty urine; depositing a lateritious sediment; the pulse sometimes quickened, sometimes preternaturally slow and soft.—The disease seldom continues long without inducing an anasarcaous state of the lower extremities.

The *encysted dropsy* is seldom preceded, or in the first instance accompanied, with any cachectic state of the system; it is distinctly observed to begin in a particular part of the abdomen, and thence gradually to diffuse itself throughout the whole cavity; the strength of the patient is long unim-

paired ; and the appetite and respiration continue good ; until the bulk and pressure of the fluid bring on various constitutional effects, which usually attend the true ascites in its early stages.

CAUSES.—In addition to the general causes of dropsy (see *Anasarca*), certain local affections, as diseases of the viscera of the abdomen ; scirrhusities of the liver, spleen, or pancreas ; enlargement of the mesenteric glands ; loss of tone in the peritoneum after pregnancy, or from atonic inflammation ; local injury, [or diseases of the heart.]

DIAGNOSIS.—The fluctuation of the contained fluid ; the diminished urine ; the general leucophlegmatic appearance of the patient.

From tympanites.—See Tympanites.

From pregnancy.—Consult the signs of pregnancy delivered by authors on midwifery.

PROGNOSIS.—*Favourable.*—The urine little diminished, or becoming more copious ; the swelling of the abdomen diminishing ; the skin ceasing to be dry ; the respiration becoming free ; the strength originally little impaired.

Unfavourable.—Great emaciation ; sympathetic fever ; intense local pain ; coma ; the disease having been induced by a diseased state of the liver, brought on by the abuse of spirituous liquors, or by diseases of the other viscera ; the constitution otherwise impaired.

TREATMENT.—*Indications.*—I. To evacuate the fluid.

II. To prevent a second accumulation.

The first is effected by,

1. Purgatives, such as are recommended against anasarca.
2. Diuretics, similar to those ordered for anasarca.
3. Friction of the abdomen with [antimonial ointment.

The editor has found the internal and external use of iodine an effectual remedy. See Scrofula.]

4. After a fair trial has been given to those remedies, which increase the natural secretions, without effect, and the pressure and tension of the abdomen become insupportable, recourse must be had to tapping, or the paracentesis of the abdomen.

The re-accumulation is sometimes prevented,

1. By removing the causes which induced the disease; and by strengthening the tone of the parts in particular, and of the system in general.

2. If the disease proceed from chronic visceral obstruction, by mercury, administered both internally, and externally by friction to the abdomen; the union of submuriate of mercury with antimony or squills [and the use of iodine.]

3. If from relaxation, by tonics, aromatics, stimulants; as directed for anasarca.

HYDROTHORAX.—DROPSY OF THE CHEST.

SPECIES.—1. *Hydrothorax pleuræ*; the fluid occupying the cavity of the pleura.

2. *Hydrothorax pericardii*; the fluid occupying the cavity of the pericardium.

SYMPTOMS.—*Of water in the cavity of the pleura.*—Great difficulty of breathing, increased upon exertion; and most considerable during the night, when the body is in an horizontal posture; distressing sense of weight and oppression at the chest; the countenance is pale; sometimes, however, it has the asthmatic purple tinge, and conveys a peculiar and striking expression of anxiety; the urine is in small quantity; great thirst; anasarca of the upper extremities; the pulse is irregular; often intermitting for two, sometimes for three strokes; palpitation of the heart; sometimes so great as to be both seen and heard; cough, with expectoration generally tinged with blood: in describing his complaint, the patient frequently mentions his having the sensation of breathing through water; difficulty of lying upon one side; and when the disease exists in both cavities of the chest, the patient is incapable of lying down at all, and is obliged to be supported by pillows in an erect position; his sleep is disturbed by dreadful dreams of fire, of drowning, of falling down precipices, &c.; and frequently he awakes with a sense of suffocation, suddenly starts from his bed, and is some time before he recovers his recollection; the arm of the side in

which the water is collected is generally cold and torpid, and often affected with numbness.—See Pleuritis, p. 150.

Of water in the cavity of the pericardium.—In addition to many of the above symptoms, the heart in this disease is greatly enlarged, so as to be felt to palpitate, even as low as the seventh or eighth rib. The irregularity of the pulse is more remarkable; at one instant it is imperceptibly small and rapid, in the next is very hard and wiry. The difficulty of breathing often assumes an intermittent form, and in the paroxysm is much more severe and distressing. Anasarca of the extremities takes place in the advanced period of the disease; and there is the same starting from sleep as in the true hydrothorax. [See Pericarditis, p. 230.]

CAUSES.—The general causes of dropsy (see Anasarca); obstruction to the free circulation of the blood through the lungs, by disease of the thoracic viscera, or loss of tone in the membranes lining the chest, [but especially by pleuritis.]

DIAGNOSIS.—The distinguishing symptoms are, the extreme difficulty of breathing; the incapacity of lying upon one, sometimes upon either side; the sudden starting from sleep; the peculiar pulse before described; the striking appearance of the countenance; the numbness of the arms; palpitation of the heart. [For stethoscopic signs, see p. 38.]

From collections of matter and blood.—By the characteristic marks enumerated by writers on surgery, when treating on such diseases of the chest.

From syncope anginosa.—The one disease consists of distinct paroxysms; each of which is brought on by certain exciting causes (see Syncope Anginosa). In the other the symptoms are usually permanent; the peculiar sensation of heat extending to the arms, which takes place in syncope anginosa, is rarely felt in hydrothorax. When syncope has long existed, and the symptoms have become less marked than in its first attack, a distinction is extremely difficult to be formed.

PROGNOSIS.—Will generally be unfavourable; more especially when hydrothorax is the consequence of organic disease; when it occurs in a shattered constitution; when the sym-

ptoms become more and more severe, and are attended with coma and spitting of blood.

TREATMENT.—The same evacuant plan is here to be pursued as recommended for the cure of anasarca and ascites.

The diuretics most usually employed are, digitalis, squill, crystals of tartar. See Treatment of Anasarca.

[Frictions and blisters on the chest, with colchicum, digitalis, &c.]

If there be much debility, myrrh combined with spiritus ætheris nitrici, or other tonics and diuretics united; with the addition of frequent blisters to the chest.

R. Myrrhæ optimæ ℥ss;
 Spiritus ætheris nitrici f. 3j;
 Infusi rosæ f. 3xij;
 Syrupi ejusdem f. 3j;

Fiat haustus ter in die capiendus.

R. Myrrhæ optimæ ℥ss;
 Olei essentialis juniperi ℥ij;
 Pulveris rhei q. s.,

Fiat bolus ter in die sumendus.

If these means should be ineffectual, and the disease appear to be purely local, recourse should be had to the operation of paracentesis thoracis, [which has been lately performed in nearly twenty cases by Dr. Davies, of Broad-street, even on children, with decided success.]

HYDROCEPHALUS.—WATER IN THE HEAD.

This disease is often the consequence of an attack of active inflammation of the membrane lining the cavities of the brain; it then produces symptoms very similar to those of phrenitis, which are quickly followed by symptoms of compression and apoplexy. See Apoplexia Hydrocephalica, and p. 132.

Water also collects in the cavities of the brain and between its membranes, from mere laxity or debility of the brain, or from general debility, or other causes more commonly pro-

ductive of the dropsics, and then the disease does not bear much resemblance to apoplexy.

SYMPTOMS.—Children are sometimes born with this disease. It takes place at all periods between birth and the age of eight, very seldom after, and is known by drowsiness, languor, strabismus, vomiting, costiveness, coma, convulsions, the bones of the head perhaps separate, the fontanels enlarge, and the head acquires an immense size.

CAUSES.—The infantile age; injury to the brain during labour; tumours within the cranium; and the other causes of the dropsies; [dentition, irritation in the digestive organs, especially the intestinal canal and liver.]

PROGNOSIS.—The disease generally kills; though after the bones begin to separate, its fatal termination is protracted. Convulsions generally preceede, and death soon follows.

TREATMENT.—*Indication.*—To promote the absorption of the effused fluid. No plan of treatment has hitherto been sufficient to cure this disease: but the most likely remedies to fulfil the indication are,

1. Blisters to the head. (?) See p. 131.
2. Mercury; applied externally, and given internally, so as to affect the mouth.
3. Diuretics of squills, digitalis, and submuriate of mercury, as recommended for anasarca.
4. Tonics, and especially cinchona and chalybeates.

[Absorption is promoted, according to Dr. Ryan, by frictions with the ioduretted mercurial ointment on the scalp. When all fails, paracentesis cranii has proved successful in the hands of Dr. Conquest, who has favoured Dr. Ryan with the following account of his cases of tapping the brain:—

“ My first successful operation was performed at St. Bartholomew's Hospital in the autumn of 1829, when only ℥iiss. of serum escaped, but during the subsequent two days, not less than ℥xiv. flowed. The child had been the subject of frequent convulsions, &c. before tapping; but only one paroxysm followed. Two years afterwards the child was in perfect health. The second patient was tapped thrice;

first on the 20th of November, when ℥xij. of serum were taken away; secondly, on the 2nd of December ℥viiij. were evacuated; and on the 16th ℥ij. Dr. Hodgkin assisted me in this case.

“The third terminated fatally after drawing ℥lvijss. by five operations, a fortnight intervening between each.

“The fourth case was and is a patient of Dr. Caldwell of the City Dispensary ℥xxiv. of serum were taken away by two operations, ℥xij. of fluid escaping each time, a month having intervened between them.

“In the *Lancet* of September the 15th, 1832, Dr. C. details the case, and states that at the end of two years the child continues well.

“The fifth patient is a child yet living, but will eventually die. I have tapped it four times since February, 1832, and taken away ℥xliv. altogether. I believe the child would have recovered had the parent consented to one or two more operations.

“I have operated on five other cases; in one instance the child survived (two tapplings, one of ℥xvj. the other of ℥xij.) six months, and then died of whooping-cough. In another case, the infant lived some months, and was carried off by teething. Another case is yet under my care, promising to do well, having been tapped three times, and the others ended fatally. December 7, 1832.”

Mr. Russell, of Aberdeen, details the following case. A fine trocar, such as is used for hydrocele, was introduced into the head of a female infant aged eight months, about half an inch in depth on the right side of the anterior fontanelle; and three ounces of serous fluid were discharged through the canula. A piece of adhesive plaster was applied over the wound, and a roller round the head. A slight degree of fever followed. In ten days afterwards a similar puncture was made on the opposite side, and five ounces and a half of turbid serum were evacuated. No unfavourable symptom followed. In five days afterwards the head was diminished two inches and a half in circumference, and two and a quarter across the vertex. In a fortnight after the last operation the

troear was passed near the first position in an oblique direction into the ventricle, when nine ounces of serum escaped in a continued stream. The pulse became weak and feeble, and she became faint; but she soon revived, and no bad symptom followed. She recovered completely, and became a lusty child of her age.—*Edinburgh Medical and Surgical Journal*, July, 1832.]

RACHITIS, OR RICKETS.

This disease is peculiar to infants and children, between the sixth month and the second year of their age. Its usual symptoms are, weakness; a white or leueophlegmatic appearance of the whole body; a bloated or very florid countenance; soft flesh; disinclination and dislike to motion; tumid abdomen, head, and joints; the wrists and ankles enlarge first, then all the bones as it were swell and become soft, especially the more spongy ones. The pulse is quick and feeble; the appetite and digestion usually bad. Dentition is generally late, though not frequently difficult, but the teeth decay soon after they appear, and fall out.

When the disease has made much progress, the cylindrical bones bend; the ribs also, and even the spine, incurvate.

CAUSES.—Scrofula; any cause inducing general weakness and relaxation. It frequently arises from unhealthy parents; especially from mothers who pass too sedentary a life in bad air, and feed upon a poor watery diet; from children's food being weak, watery, or too viscid to be properly digested; but, above all, perhaps from bad nursing, or children being left wet, dirty, or exposed to a cold moist air without sufficient covering; from want of proper exercise, and from close and crowded apartments; from being kept too long at the breast; from sucking a nurse whose milk is impoverished by irregularity; lastly, from the constitution being enfeebled by disease in early infancy, especially weak bowels.

TREATMENT.—*Indications*.—I. To brace and strengthen the solids.

II. To promote digestion and the formation of a good chyle.
These ends will be best effected by,

1. Wholesome and dry food ; good bread or biseuits, and roasted meats rather than boiled, with a little port wine. Should the child be too young to eat flesh meats, its diet ought to consist of milk, rye, millet, pearl-barley, salep, arrow-root, semolina, with spices, animal jellies, &c.

2. Good nursing, with regular exercise in a pure dry air.

3. Chalybeates and tonics ; especially steel wine, muriated iron, carbonated iron, bark, calumba, and myrrh.

[Iodine is the only effectual remedy for this disease.—See Serofula.]

R. Vini ferri f.3j ;
Sodæ carbonatis gr. vj ;
Aquæ destillatæ f.3ij ;
Syrupi tolutani f.3j ;

Fiat haustulus ter in die adhibendus.

R. Tincturæ ferri muriatis ℥ iij ;
Aquæ einnamomi,
Syrupi rosæ, āā f.3j ;

Fiat haustulus ter in die capiendus.

4. Cold bath, and friction with warm flannel.

5. The mineral and vegetable alkalis are also esteemed by some.

R. Sodæ carbonatis gr. iv ;
Pulveris calumbæ gr. vj ;

Fiat pulvis bis in die, ex syrupo, adhibendus.

R. Liquoris potassæ subcarbonatis ℥ iij ;
Aquæ cinnamomi f.3ij ;

Fiat haustus ter in die deglutiendus.

6. Phosphorated medicines have been exhibited with advantage, especially the phosphate of lime and phosphate of soda.
[The solution of the muriate of lime is also much praised.]

R. Calcis phosphatis ʒss—ʒj ;

Fiat pulvis ter in die sumendus ex syrupo.

R. Sodæ phosphatis ʒss ;
Tincturæ opii ℥ j ;
Aquæ cinnamomi f.5jss ;

Fiat haustus ter in die exhibendus.

R. Sodæ phosphatis 5ss ;
 Infusi cascarillæ f.3iv ;
 Tincturæ cinchonæ f.3ss ;
 Syrupi rosæ f.3j ;

Misce pro haustu ter in die capiendo.

[It is of primary importance, that the diet should be nutritious. It ought to consist of gravies, jellies, soups, with sago, arrow-root, and milk. Gravy of roast meat with mashed potatoe is generally relished.]

If the child is of a gross habit, a calomel purge should be given occasionally. [The hydrargyrum eum ereta, with rhubarb, is a valuable remedy. Syrup of quinine and the oxymuriate of mercury, with tincture of cinchona, is also extolled by some writers. The tincture of iodine in syrup, and the liniment of iodine applied to the abdomen when the mesenteric glands are enlarged, have been used with perfect success by Dr. Ryan, see pp. 366, 367.]

ORDER III.

IMPETIGINES.

CHARACTER.

Cachexy, chiefly deforming the skin and external parts of the body.

GENERA.

SCROFULA,	.	.	.	Scrofula.
SYPHILIS,	.	.	.	Venereal disease.
SCORBUTUS,	.	.	.	Scurvy.
ELEPHANTIASIS,	.	.	.	Elephant skin.
LEPRA,	.	.	.	Leprosy.
FRAMBÆSIA,	.	.	.	Raspberry-like eruption.
TRICHOMA,	.	.	.	Trichoma.
ICTERUS,	.	.	.	Jaundice.

SCROFULA.

The various external and local symptoms produced by this disease are described by writers on surgery.

Its first appearance is usually between the third and seventh years of age, or at any period before the age of puberty, after which it seldom makes its first attack. It most commonly affects children of a lax habit, with smooth, soft, and fine skins; fair hair; a peculiar fulness and rosy appearance of the face; large eyes, and very delicate complexions. It is also apt to attack such children as show a disposition to rickets; marked by a protuberant forehead, enlarged joints, and tumid abdomen. [It is one of the commonest diseases; there is scarcely a family without it.]

CAUSES.—It seems to be peculiar to cold and variable climates; it is mostly the effect of an hereditary predisposition; and is excited by crude indigestible food, bad water, living in damp, low situations, debility however induced; syphilis.

TREATMENT.—The remedies which have been employed with the greatest success, [until iodine was discovered,] are,

1. Sea-bathing, and living by the sea side.
2. Mineral waters; the sulphureous and chalybeate.
3. Tonics; especially Peruvian bark, myrrh, sulphate of iron, and ammoniacal iron.

The *mistura ferri composita*, in the dose of two table spoonfuls three times a day.

4. The inhalation of oxygen gas.
5. The juice of the fresh leaves, or strong decoction of the dried leaves of the *tussilago*.

6. Mercurial alteratives; the *hydrargyrus cum sulphure*, sulphuret and submuriate of mercury, Plummer's pill.

Mereury, when taken so as to affect the mouth, mostly increases this disease; and it may be considered as a bad medicine in the generality of scrofulous cases given in any form: but now and then we find it otherwise. Mercurial alteratives,

with conium and cinchona, have in some cases been very serviceable.

7. Antimonials, with decoctions of guaiacum, cinchona, sarsaparilla, sassafras, mezereon, and dulcamara.

The old decoctum Lusitanicum is a very excellent antiscrofulous medicine, especially when the disease makes its appearance in the periosteum and bones of adults.

DECOCTUM LUSITANICUM.

R. Radicis sarsaparillæ,
Ligni sassafras incisi,
—— santali rubri,
—— guaiaci, excisi, singulorum \mathfrak{z} jss;
Radicis mezerei,
Seminum coriandri, āā \mathfrak{z} ss;
Aquæ destillatæ Ox;

Decoque ad octarios quinque.

Capiat æger octarium unum quotidie, partitis haustibus.

[The empirics in Ireland cure scrofula by this remedy, and compel the affected to take it as the common drink for several weeks, and to avoid every kind of aliment, unless unfermented bread. They dress ulcers with resinous ointment and red precipitate.]

8. Muriated barytes, and muriate of lime.

R. Solutionis muriatis barytæ Ph. Ed. \mathfrak{m} iv;
Aquæ cinnamomi f. \mathfrak{z} jss;

Fiat haustus ter in die capiendus.

This medicine should be very gradually and cautiously increased, so that the patient shall take as much as the stomach will bear without producing nausea.

R. Calcis muriatis gr. iv;
Extracti conii gr. v;

Fiant pilulæ duæ ter quotidie capiendæ.

This crystallized muriate of lime remains in the retort after the sublimation of the carbonate of ammonia.

9. Sedatives, especially conium and hyoscyamus.

10. Lime-water.

11. Alkalis; especially soda with Peruvian bark.

R. Sodæ carbonatis gr. vj;
 Pulveris cinchonæ ℥j;
 Fiat pulvis ter in die sumendus.

R. Sodæ carbonatis exsiccatae gr. viij;
 Pulveris cinchonæ ℥j;
 Fiat pulvis ter in die adhibendus.

12. Burnt sponge; light, nutritive, and generous diet; pure dry air; friction; moderate exercise.

R. Spongiæ ustæ gr. x—xxx;
 Sacchari purificati ℥ss;
 Fiat pulvis ter in die capiendus.

13. Iodine, a simple combustible substance prepared from kelp, has been recommended in the cure of this disease, and some cases are said to have been benefited by it. One ounce of alcohol dissolves forty-eight grains: of this tincture, from ten to forty minims may be given three times a day, in any simple water, or the decoctions of bark or cascarilla, and the dose gradually increased until it excites the heart's action.

[The discovery of iodine, as a remedy for every form of scrofula, and for a great number of other tedious and hitherto incurable diseases, is one of the most satisfactory and important improvements in modern medicine. A brief account of this extraordinary remedy deserves the most attentive consideration.

Iodine was discovered in 1812 by M. Courtois, a manufacturer of saltpetre in Paris, who, in procuring carbonate of soda from sea weeds, observed that metallic vessels were corroded by the residual liquor. The newly discovered substance was examined by Clement Desormes, and its real nature determined by Gay-Lussac, Sir H. Davy, and Dr. Wollaston—stimulant, absorbent, diuretic, emmenagogue.

It was first employed by Dr. Coindet, of Geneva, as he considered that this substance was the active principle in burnt sponge. It was first recommended to the profession in this country by Sir Andrew Halliday, after his return from the continent in 1819; and in 1821, he published a paper upon it in the *London Medical Repository*, detailing its various preparations, their uses and advantages.—(See *London Med.*

and *Surg. Journal*, 1832, v. i. p. 96.) Dr. Manson, of Nottingham, commenced his trials of this remedy in March, 1821, and from that period to August, 1825, when his work on it was published, he had prescribed upwards of 180 ounces of iodine, and therefore his experience was extensive. He found it remove 116 cases of bronchocele, palsy arising from tumours or effusion in the brain, chorea, scrofula, fistula lachrymalis, nine cases of deafness from obstruction in the eustachian tube, dysphagia, white swelling, and in morbus coxarius and distorted spine considerable relief was afforded. Dr. Gairdner had published an essay on iodine in 1824, in which he decried its value, and argued that it was a dangerous remedy in some cases. He advised it in tuberculous diseases of the chest and abdomen; in phthisis and mesenteric disease; but Dr. Baron, of Gloucester, had previously recommended it in large doses in phthisis. He likewise found it useful in ascites, as also did Dr. Van der Kolk, of Amsterdam, in 1826. During the last few years, a vast number of writers had published, in the periodicals, their opinions in favour of this remedy in various diseases; but, in 1829–30, M. Lugol, of Paris, tried it on a much more extensive scale than any of his predecessors, and reported so favourably of it, that the Academy of Sciences appointed a commission to observe his practice at the hospital St. Louis, and these reported in the strongest terms of its inestimable value. They declared that iodine was a cure for every form of scrofula, whether glandular enlargement in the neck, axillæ, groins, or mesentery; in ulcers, however extensive; in abscesses, fistulæ, caries, venereal affections; in scrofulous habits; in cancerous ulcerations of the face and scalp; in strumous ophthalmia producing blindness; in cutaneous scrofula of the nose, upper lip, and cheeks; in large abscesses of the neck, fistulæ of the thigh, knee, &c.; white swelling of the elbow, knee, and shoulder; in ulcerations of the hip, caries of the vertebræ, lumbar abscesses, and caries of the maxillary bones. A vast number of other diseases have been relieved by iodine. Disorganizations of the uterus and ovary. —Montgomery, in *Dub. Med. Trans.*, 1830; Ryan, in *Lond.*

Med. and Surg. Journ., 1832, v. i. Enlargement of the spleen.—M^cDowell of Dublin, *Op. jam cit.* 1831, v. vi. Enlargement of the liver.—Elliotson, *Op. cit.* 1832, v. ii. and *Lancet*. Schirrus testis.—A. T. Thomson and others. Hydrocele.—Richard. Ovarian dropsy.—A. T. Thomson and Ryan. Enlargements of the joints after rheumatism, gout, and syphilis; thickening of tendinous sheaths, amenorrhœa, leucorrhœa, and gonorrhœa; in the first stage of phthisis—see editorial remarks; in chronic hydrocephalus; and, perhaps, in stricture of the urethra, œsophagus, and lachrymal passages.

The following are M. Lugol's formulæ, and are now generally preferred. He maintains that the tincture and syrup of iodine are much less efficacious than the solution of the remedy in distilled water. He dissolves half or two-thirds of a grain of iodine in eight ounces (*une livre*) of distilled water, and adds twelve grains of chloride of sodium, 1829; but in 1830, he preferred the ioduretted mineral water about to be described.

CONCENTRATED SOLUTION OF IODINE IN 1830.

R. Iodinæ pulveris ʒj;
Potassæ hydriodatis ʒij;
Aquæ destillatæ ʒviij.

Doses for adults six drops in a glass of water, sweetened with sugar, twice a day, increasing every week the daily dose by two drops, until it shall have reached thirty-six drops. For children under seven years old, the dose is two drops twice a day, increased to five daily. From seven to fourteen years, the dose is sixteen drops daily. This solution is not so exact as the following, but is preferred in private practice:

IODURETTED MINERAL WATER.

R. Iodinæ gr. $\frac{3}{4}$;
Potassæ hydriodatis gr. jss;
Aquæ destillatæ ʒviij.

During the first week the dose is half a grain daily, after the second week three-fourths of a grain, during the fourth

or fifth a grain daily; and a grain and a half is the maximum dose.

IODURETTED OINTMENT.

R. Iodinæ gr. xij;
Potassæ hydriodatis ℥iv;
Adipis recentis ℥ij.

This is used in scrofulous ophthalmia, ulcers, tubercles, &c.

OINTMENT OF PROTO-IODURET OF MERCURY.

R. Hydrargyri proto-iodureti ℥ij—℥iij—℥iv;
Adipis recentis ℥ij—℥ij—℥ij.

These ointments produce little pain, and are successfully employed in esthiomenic or corroding scrofulous ulcers, in persons contaminated by syphilis. The editor has added four grains of morphia with great benefit.

SOLUTIONS OF IODINE FOR EXTERNAL USE.

R. Iodinæ gr. ij—ij—iv;
Potassæ hydriodatis gr. iv—vi—viij;
Aquæ destillatæ Oj—Oj—Oj.

Injected into the lachrymal passages, between the eyelids, in coryza and ozena. In the last, care must be taken not to direct too much of the solution through the nostrils towards the fauces.

RUBEFACIENT SOLUTION OF IODINE.

R. Iodinæ ℥iv;
Potassæ hydriodatis ℥j;
Aquæ destillatæ ℥vj.

Applied to surfaces that require strong excitement by means of lint, as in chronic ophthalmia, coryza, and ozena—may be added to baths, and poultices.

IODURETTED BATHS.

The last solution is added to warm water, the quantity being determined by the sensations of the patient. The bath

should be prepared in a *wooden* box—is applicable to hands, feet, chin, &c.

IODURETTED CATAPLASMS.

These are composed of ordinary materials, as linseed meal, and the rubefacient solution; employed in hard tubercular tumours which resist other modes of treatment, as in cold abscesses. Injecting the solution into the cyst, rubbing its parietes with the ointment, and then applying this cataplasm, will be necessary in some cases.

CAUSTIC IODINE.

R. Iodinæ $\mathfrak{z}\text{j}$;
Potassæ hydriodatis $\mathfrak{z}\text{j}$;
Aquæ destillatæ $\mathfrak{z}\text{ij}$.

This form is used when the solution and ointment fail. It is applied twice or thrice a week to the eyelids, nasal fossæ, to repress excessive granulations, to modify the state of the red hypertrophied skin, impregnated with pus, surrounding certain scrofulous ulcers and tubercles. It improves the appearance of soft and fungous tissues in these cases, with a celerity that surpasses imagination.

EYE-LOTION OF IODINE.

R. Tincturæ iodinæ, gutt. xxx;
———— opii, gutt. xxxvj;
Aquæ destillatæ $\mathfrak{z}\text{iv}$.

Applied in obstinate scrofulous ophthalmia.

PLASTER OF IODINE.

R. Emplastri lythargyri $\mathfrak{z}\text{ij}$;
Iodinæ pulveris gr. xxx;
Potassæ hydriodatis $\mathfrak{z}\text{ij}$;
Extracti opii $\mathfrak{z}\text{ss}$.

In enlargement of the parotid and other glands.

OINTMENT OF IODINE AND OPIUM.

R. Iodinæ gr. xv;
 Potassæ hydriodatis ʒj;
 Tincturæ opii ʒij;
 Adipis recentis ʒij.

Applied to scrofulous ulcers.

PILLS OF IODINE.

R. Iodinæ gr. j;
 Ext. glycyrrhizæ gr. ix;

In pilulas duas divide, capiat unam mane nocteque.

M. Lugol exhibits the proto-ioduret of mercury in doses of two grains daily, in syphilitic ulcers in scrofulous habits. This medicine is prepared as follows, according to Dr. O'Shaughnessy:—

“Dissolve, without applying heat, a sufficient quantity of pure mercury in one part of nitric acid diluted with three parts of distilled water, and add mercury until no more be dissolved. A proto-nitrate of mercury is thus formed, which frequently shoots into a mass of white crystals. Any excess of metallic mercury is to be separated by inclining the vessel and allowing it to run off, the solution containing the crystals is then to be diluted with distilled water until they are perfectly dissolved; a pure proto-nitrate of mercury is thus obtained, the formation of the per-nitrate being only occasioned by the application of heat and the use of too concentrated nitric acid.

“Hydriodate of potass is to be added to this solution as long as any precipitate occurs. Filtration is then to be performed, the matter remaining on the filter to be well washed with distilled water, and dried in a water bath. As thus prepared, the proto-ioduret of mercury is a fine yellow powder, quite insoluble in water at any temperature.”

The ioduret of lead is considered by far the most valuable of the metallic compounds of iodine. It does not cause cutaneous inflammation, like the preparations of iodine and hydriodate of potass, and succeeds when all these have failed. It was discovered by MM. Cattereau and Verdet de Lisle.

The dose is from a quarter to half a grain; and the ointment is composed of $\mathfrak{z}\text{j}$ to $\mathfrak{z}\text{j}$ of lard. This medicine is prepared by adding a solution of 100 parts of the hydriodate of potass, to a solution of 75 parts of the acetate of lead. One hundred parts of this compound consists of 54.9 iodine, 45.1 lead.—M. Henry (fils), *Journ. de Pharmacie*, Mai, 1831. It was discovered by M. Polydore Boullay in 1827, and lately brought under the notice of the profession in Paris, by M. Caventon.

When precipitated in the cold, the ioduret of lead is in a greater measure dissolved by boiling water. The crystalized product deposited from warm water should alone be employed for pharmaceutical and therapeutical purposes.

It is improper to order iodine in pills.

Though the general opinion is, that the preparations of iodine, or the hydriodate of potass, cannot be given in bitter infusions without decomposition, Dr. Ryan and others have used them in this combination, with the most decided advantage.—*London Medical and Surgical Journal*, vol. i., February, 1832. Dr. O'Shaughnessy, Mr. Pereira, and Mr. Everett, all eminent chemists, maintain that the hydriodate of potass, which is generally in use, is composed of 70 parts of carbonate and 30 of the hydriodate in 100. This accounts for its inefficacy in the very large doses prescribed by Dr. Elliotson, who sent to Dublin for the genuine medicine, where all the new chemical remedies are prepared scientifically, and may be depended on.—See Dr. Graves's Clinical Lectures, *London Medical and Surgical Journal*, Dec., 1832, vol. ii., No. 46. Numerous writers have stated that the ordinary doses of this medicine have produced the best effects. There are no less than thirty formulæ of iodine in *Jourdan's Universal Pharmacopœia*, 1829, now translated by Professor Rennie.]

SCORBUTUS.—THE SCURVY.

SYMPTOMS.—Heaviness, weariness, dejection of spirits, anxiety and oppression at the præcordia.—As the disease

advances, the countenance becomes sallow and bloated ; respiration is hurried by the least exertion ; the breath becomes offensive ; wandering pains are felt in different parts of the body, particularly during the night ; the pulse is small and frequent ; the gums swell, become spongy, and bleed upon the slightest touch ; they separate from the teeth, which become loose ; petechiæ and maculæ appear in various parts ; the slightest scratch degenerates into a foul and ill-conditioned ulcer ; spontaneous ulceration likewise takes place upon the gums, and upon the surface of the body ; the joints become swelled and stiff ; the tendons of the legs rigid, contracted, and exceedingly painful ; the bowels are either obstinately constipated, or there is a diarrhœa ; the urine is high-coloured, covered with an oily pellicle, and changes vegetable blues to a green colour ; great emaciation ensues ; passive hæmorrhages take place from the nose, the ears, the anus, and even from the extremities of the fingers ; all the excretions become intolerably fetid ; still, however, the appetite frequently remains entire, and the patient retains his intellectual faculties, until death relieves him from a horrid complication of misery.

CAUSES.—Defect of nourishment ; diet of salted or putrescent food, with deficiency of vegetables ; want of cleanliness ; cold united to moisture, or the transition from a warm to a cold temperature ; want of exercise ; depressing passions of the mind.

DIAGNOSIS.—*From malignant fever.*—By the absence of feverish symptoms ; by the intellectual faculties being little impaired ; by the disease coming on more gradually, and continuing a much longer time ; by its not being contagious.

PROGNOSIS.—Will be drawn from the severity of the disease ; the situation of the patient with respect to vegetable diet, or other proper substitute.

Favourable circumstances.—The constitution not having been weakened by previous disease ; little reduction of strength ; moist skin ; bilious diarrhœa ; the patient capable of muscular motion ; slow pulse ; the petechiæ, if any appear, being of a bright red colour ; the absence of ulceration.

Unfavourable.—Great prostration of strength; redness of the eyes; flushed countenance; quick weak pulse; profuse hæmorrhages of dissolved blood; petechiæ and maculæ of a dark livid colour; extreme oppression at the præcordia; fetid and involuntary evacuations.

TREATMENT.—*Indications.*—I. To correct the septic tendency of the fluids.

II. To palliate urgent symptoms.

III. To restore the tone of the solids.

The first indication is fulfilled by the use of substances which contain oxygen, especially

1. Vegetable food of every description; the vegetable acids; as the orange, the lime, the lemon, or the citric acid in a concrete form; if there be great prostration of strength, they may be united with wine. [This plan was first proposed by the venerable Sir Gilbert Blane, Bart., in 1780.—See p. 63.]

2. Fermented and fermenting liquors; as ale, cyder, spruce beer, infusion of malt, fermenting wines, &c.; the subacid fruits; sugar.

3. Oxygen; which may be breathed, or given in the oxygenated muriate of potass.

4. A solution of nitre in common vinegar.

5. Mineral acids; more particularly the oxygenated muriatic, the nitric, and sulphuric.—See pp. 87. 94, 95.

Saline medicines, according to Stevens, p. 94.

R. Potassæ nitratis ʒij;
Aceti communis f. ʒij;
Syrupi f. ʒij;
Aquæ destillatæ f. ʒxij;

Fiat potio quotidie bibenda.

R. Acidi sulphurici diluti f. ʒjss;
Syrupi rosæ f. ʒij;
Aquæ destillatæ f. ʒiv;

Misce pro potu ordinario.

R. Acidi nitrici f. ʒj;
Syrupi rosæ f. ʒij;
Aquæ destillatæ f. ʒxiv;

Misce pro potu communi.

6. Diaphoretics; especially the serum sinapeos.

7. Occasional aperients of infusion of tamarinds, cream of tartar, the sulphates of soda and magnesia.

8. The utmost attention to cleanliness.

With regard to the second indication,

Ulcerations of the gums require astringent gargles of alum, muriatic acid, linimentum æruginis, decoction of bark, the steam of vinegar.

Acute pains are relieved by opium.

Oppression at the chest, and difficulty of breathing, by blisters, nitric and sulphuric æther with camphor.

Contractions of the muscles of the legs, by fomentations of vinegar and water, or emollient cataplasms; friction.

Scorbutic ulcers upon the surface of the body, by the means recommended in practical works on surgery.

The third indication requires,

1. Pure, temperate, and dry air.
2. Regular exercise.
3. A nutritive diet of recent animal and vegetable food.
4. Tonics and astringents, of Peruvian bark, the mineral acids, preparations of iron.
5. Stimulants, of horse-radish, mustard, pepper, wine, &c.

ICTERUS.—JAUNDICE.

SPECIES.—I. *Icterus calculosus*:—with acute pain in the epigastric region, increased after meals, with discharge of bilious concretions.

2. *Icterus spasmodicus*; without pain after spasmodic diseases or affections of the mind.

3. *Icterus hepaticus*; without pain after diseases of the liver.

4. *Icterus infantum*; occurring in infants shortly after birth.

SYMPTOMS.—Languor; inactivity; loss of appetite; sense of uneasiness or pain in the right hypochondrium; heat and pricking of the skin; bitter taste in the mouth; the tunica conjunctiva of the eye is perceived to become of a yellow colour, and soon afterwards the whole surface of the body; the urine is high-coloured, and tinges linen yellow; nausea;

vomiting ; obstinate costiveness or diarrhœa ; the stools are of a clay colour ; the pulse is generally slow, yet sometimes, especially where the pain is acute, it becomes quick and hard, and there is a feverish heat and dryness of the skin. Should the disease be long protracted, petechiæ and maculæ sometimes appear in different parts of the body ; the skin, before yellow, turns brown, or livid ; even passive hæmorrhages and ulcerations have broken out, and the disease has in some instances assumed the form of scurvy.

CAUSES.—Biliary calculi in the gall-bladder, or its duct ; inspissated bile ; spasmodic contraction of the ducts themselves, often from passions of the mind ; pressure upon the ductus communis choledocus ; either by collections of hardened fæces, by tumours of neighbouring viscera, as of the pancreas, of the mesenteric glands, of the pylorus, of the stomach, &c. ; diseases of the liver itself ; as inflammation, partial scirrhus, &c. ; the active operation of some poisons and purgatives ; morbid redundancy of bile.

Proximate.—The absorption of bile into the sanguiferous system.

DIAGNOSIS.—The characteristic symptoms which distinguish this from every other disease are, the yellow colour of the skin, more especially observable in the tunica conjunctiva of the eye ; the bitter taste in the mouth ; the yellow tinge communicated to linen by the urine ; the white or clay-coloured fæces ; added to the sense of pain or uneasiness in the right hypochondrium.

PROGNOSIS.—*Favourable.*—The disease having arisen from a cause that admits of easy removal ; as spasm, accumulated fæces, the temporary pressure during pregnancy, &c. &c. ; the strength and appetite little impaired ; the disease suddenly appearing ; cessation of local pain, followed by bilious diarrhœa.

Unfavourable.—Circumstances leading to the suspicion of the disease having originated in a scirrhus state, either of the liver itself, or of the neighbouring viscera ; as the previous irregular life of the patient, long-continued local pain and tumour, &c. ; symptoms of hectic ; colliquative evacuations ;

symptoms showing a determination to the head; as vertigo, flushed countenance, head-ache; supervening anasarca; its being complicated with any other disease.

TREATMENT.—*Indications*.—I. To remove the cause of obstruction to the passage of the bile into the duodenum.

II. To palliate symptoms.

If it arise from calculus, from spissitude of the bile, or spasm, and is attended by much pain or symptoms of fever, recourse must be had to,

1. Cathartics; especially aloes, castor oil, soap, submuriate of mercury, and tartrate of potass.

R. Potassæ tartratis ʒjss;
 Infusi quassæ f. ʒiij;
 — sennæ f. ʒiv;
 Tincturæ ejusdem,
 Syrupi aurantii, aa f. ʒss;

Fiat mistura, cujus sumat æger cochlearia tria magna ter in die.

R. Saponis duri gr. vj;
 Extracti colocynthidis compositi gr. ij;
 — gentianæ gr. ij;
 Pulveris rhei q. s.;

Fiant pilulæ duæ ter in die capiendæ, superbibendo haustum infusi anthemidis.

R. Hydrargyri submuriatis gr. j;
 Pulveris rhei gr. vj;
 Saponis duri gr. iv;

Fiant pilulæ duæ singulis auroris sumendæ.

R. Pilulæ aloes cum myrrha gr. vj;
 Saponis duri gr. iv;

Fiant pilulæ duæ nocte maneque capiendæ.

R. Aloes socotorinæ gr. iij;
 Saponis duri gr. vj;

Fiant pilulæ duæ mane seroque deglutiendæ.

2. Gentle emetics, where the local pain is not acute.

Keeping up a constant nausea with small doses of ipecacuanha, often emulges the bile-ducts more effectually than purgatives.

3. The warm bath; fomentations and blisters to the right hypochondrium or pit of the stomach.

4. Emollient clysters.

5. Opium, conium, hyoscyamus, tepid diluents, where the pain is evidently spasmodic.

6. Lithontriptics of soda, potass, soap; also raw eggs, turpentine with æther, and stomachic bitters, especially taraxacum, calumba, gentian.

R. Saponis duri gr. xv;

Fiant pilulæ tres ter in die sumendæ.

R. Saponis duri ℥ss;

Pulveris rhei gr. v;

Aquæ q. s.;

Fiant pilulæ tres ter in die capiendæ.

R. Sodæ carbonatis exsiccatae,

Saponis duri, āā ℥ss;

Fiant pilulæ quatuor ter in die sumendæ.

R. Sodæ carbonatis ℥ss;

Extracti taraxaci gr. viij;

Fiant pilulæ tres vel quatuor ter quotidie sumendæ.

R. Sodæ carbonatis gr. viij;

Extracti taraxaci ℥ss;

Pulveris rhei gr. ij;

Fiant pilulæ quatuor ter in die deglutiendæ.

R. Liquoris potassæ ℥ x;

Aquæ cinnamomi f. 3x;

Fiat haustus ter in die sumendus.

R. Decocti taraxaci f. 3xij;

Tincturæ calumbæ f. 3jss;

Liquoris potassæ ℥ x;

Fiat haustus ter in die capiendus.

R. Extracti gentianæ,

Sodæ carbonatis,

Pulveris rhei, āā gr. v;

Fiant pilulæ tres ter in die sumendæ.

R. Terebinthinæ canadensis ℥j;

Vitelli ovi partem quartam,

Aquæ destillatæ f. 3xij;

Syrupi aurantii f. 3j;

Spiritûs ætheris sulphurici compositi f. 3j;

Misce secundum artem ut fiat haustus ter in die sumendus.

R. Copaibæ (vitel. ovi solut.) ʒss;
 Syrupi rosæ f.ʒj;
 Aquæ pimentæ f.ʒxiij;
 Spiritûs ætheris sulphuriei compositi f.ʒss;

Fiat haustus ter in die sumendus.

7. Bath and Cheltenham waters.

If from inflammation, by the means laid down for the cure of hepatitis.

If from scirrhus tumours, iodine, mercury, internally and externally, by friction, upon the abdomen; conium; electricity, and other means elsewhere recommended.

If from accumulations of hardened fæces in the intestines, brisk cathartics; copious enemata; dashing cold water upon the extremities.

Should the disease assume the scorbutic form, acids, and other remedies adapted to that complaint, must be had recourse to.

[In some cases there is an intolerable itching in every part of the skin, accompanied by somnolence. The liver becomes more or less diseased when jaundice continues for several weeks, though not amounting to hepatitis. Patients are often surprised, when labouring under chronic or sub-acute hepatitis, on the judicious physician inquiring, if they at any time laboured under jaundice. They often answer in the affirmative.]

The following Table is intended to show the Doses of Medicines proper for persons of different ages : thus, supposing one drachm of any medicine a sufficient dose for an adult, that is, for one of twenty-one years of age, then other ages will require as follows * :

<i>Ages.</i>	<i>Common Dosc.</i> 5j.	<i>Proportionate Doses.</i>
Weeks . 7	. . $\frac{1}{15}$	. . gr. iv.
Months . 7	. . $\frac{1}{12}$	. . gr. v.
14	. . $\frac{1}{8}$	. . gr. viij.
28	. . $\frac{1}{3}$	. . gr. xij.
Years . . 3 $\frac{1}{2}$	. . $\frac{1}{5}$	. . gr. xxv.
5	. . $\frac{1}{3}$	. . . ʒj.
7	. . $\frac{1}{2}$	. . ʒss.
14	. . $\frac{2}{3}$	. . . ʒij.
21	. . —	. . . ʒj.
63	. . $\frac{1}{12}$	. . gr. lv.
77	. . $\frac{5}{8}$	. . ʒijss.
100	. . $\frac{4}{5}$	. . . ʒij

[* The judicious and scientific practitioner is aware of the difficulty of determining doses in consequence of peculiarity of constitution, habit of body, and state of health. Hence he will order a smaller quantity than the ordinary dose in doubtful cases, as it is safer to repeat medicine than prescribe it in an over dose at first.]

A TABLE

EXHIBITING THE NAMES AND DOSES OF MEDICINES IN THE
BRITISH AND FOREIGN PHARMACOPŒLÆ, CONTAINING ALL
THE NEW REMEDIES.

Abietis resina, used in plasters.

Absinthium	Θj ad ʒj
Acaciæ gummi, see Mucilag.	
Acetosæ folia	f. ʒss ad f. ʒij
Acetosella	f. ʒss ad f. ʒjss
Acetas ferri. D.	℥ x ad ℥ xxx
— hydrargyri. D. E.	gr. i ad vi
Acetum	f. ʒj ad f. ʒss
— colchici	f. ʒss ad f. ʒjss
— scillæ	f. ʒss ad f. ʒjss
Acidum aceticum dilutum	f. ʒj ad f. ʒss
— fortius	℥ x ad ℥ xxxx
— benzoicum	gr. x ad ʒss
— citricum	gr. x ad ʒj
— muriaticum	℥ x ad ʒss
— nitricum dilutum	{ properly diluted. ℥ x ad ʒss
— sulphuricum dilutum	{ properly diluted. ℥ vi ad ʒss
— prussicum	℥ ij gradually ad ℥ viii
— tataricum	gr. x ad ʒss
Aconiti folia	gr. j ad gr. v
Ærugo	gr. $\frac{1}{8}$ ad gr. $\frac{1}{2}$
Æther rectificatus	f. ʒss ad f. ʒij
— nitrosus	f. ʒss ad f. ʒij
Alii radix, the juice	f. ʒss ad ʒij
Aloes spicatae extractum	gr. v ad gr. xv
Althææ folia et radix, see Decoct.	
Alumen	gr. v ad gr. xv
— exsiccatum, used externally.	
Ammoniæ subcarbonas	gr. v ad gr. xv
— murias	gr. x ad ʒss
Ammoniacum	gr. x ad ʒss

Amygdalæ amaræ, narcotic.

———— *dulces*, see *Mist. Amygd.*

Anethi semina gr. x ad 3j

Anisi semina gr. x ad 3j

Anthemidis flores gr. x ad 3j

Antimonii sulphuretum præcipitatum gr. i ad gr. v

Antimonium tartarizatum { emetic, gr. i ad gr. iv
alterative, gr. $\frac{1}{6}$ ad gr. $\frac{1}{2}$

Aqua anethi

———— *carui*

———— *cinnamomi*

———— *fœniculi*

———— *menthæ piperitæ*

———— *viridis*

———— *pimentæ*

———— *pulegii*

———— *rosæ*, used principally in lotions, &c. and to cover the taste of bad medicines.

———— *chlorini*. D. f. 3j ad 3ij

———— *picis liquidæ*. D. Oj ad Oij

in the course of the day.

———— *sulphureti potassæ*. D. ℥ xx ad f. 3ij

———— *supercarbonatis potassæ*. E. f. 3vij

three times a day.

———— *supercarbonatis sodæ* Oss ad Oj

two or three times a day.

Argenti nitras gr. $\frac{1}{6}$ ad gr. iii

———— *crystalli*. D. gr. $\frac{1}{6}$ ad gr. j

Armoraciæ radix, ad libitum.

Arnieæ montanæ herba. E. gr. v ad gr. x

Arsenicum album sublimatum gr. $\frac{1}{10}$ ad gr. $\frac{1}{4}$

Arsari folia, used as an errhine.

Asafœtidæ gummi resina gr. v ad 3ss

Aurantii cortex, see *Tinet. Aurantii*.

Balsamum Peruvianum gr. x ad 3ss

———— *tolutanum* gr. x ad 3ij

Belladonnæ folia gr. $\frac{1}{2}$ ad gr. iii

Benzoinum gr. x ad 3ss

Bismuthi subnitras gr. v ad gr. xv

Bistortæ radix gr. x ad 3i

Cajuputi oleum ℥ ij ad ℥ v

Calami radix gr. x ad 3j

Calamina, used externally.

Calumba	gr. x ad ʒj
Calx, see Liq. Calcis.	
Cambogia	gr. ij ad gr. x
Camphora	gr. iij ad ʒj
Canellæ cortex	gr. x ad ʒss
Cantharis	gr. ½ ad gr. iij
Cancerorum lapilli	ʒss ad ʒj
Capsici baccæ	gr. v ad gr. x
Carbo ligni	gr. x ad ʒj
Cardamines flores	ʒj ad ʒj
Cardamomi semina	gr. x ad ʒj
Caricæ fructus, ad libitum.	
Carui semina	gr. x ad ʒj
Caryophylli	gr. v ad gr. x
Caryophyllorum oleum	℥ ij ad ℥ v
Cascarilla cortex	gr. x ad ʒss
Cassiæ pulpa	ʒss ad ʒj
Castoreum	gr. x ad ʒss
Catechu extractum	gr. x ad ʒij
Centaurii cacumina	gr. xv ad ʒj
Centauriæ benedictæ herba. E.	gr. xv ad ʒj
Cetaceum	ʒj ad ʒjss
Cera flava et alba	ʒj ad ʒss
Cinchonæ cordifoliæ cortex	gr. x ad ʒij
———— lanceifoliæ	gr. x ad ʒij
———— oblongifoliæ	gr. x ad ʒij
Cinnamomi cortex	gr. v ad ʒj
———— oleum	℥ j ad ℥ iij
Chloruretum calicis et sodæ, see p. 88.	
Coccus, used for colouring medicines.	
Colchici radix et semina	gr. j ad gr. iij
Colocyntidis pulpa	gr. j ad gr. v
Confectio aromatica	gr. x ad ʒj
———— amygdalarum, used for making the emulsion.	
———— aurantium	ʒj ad ʒj
———— cassiæ	ʒj ad ʒj
———— opii	gr. x ad ʒss
———— piperis nigra	ʒj ad ʒij
———— rosæ caninæ	ʒj ad ʒj
———— rosæ gallicæ	ʒj ad ʒj
———— rutæ, used in clysters.	
———— scammonia	ʒj ad ʒj
———— sennæ	ʒj ad ʒss
Conii folia et semina	gr. ij ad ʒj
Contrayervæ radix	gr. x ad ʒss

Copaiba	• • • • •	℥j x ad ʒj
Coriandri semina	• • • • •	ʒj ad ʒj
Cornu ustum	• • • • •	ʒss ad ʒij
Cretæ	• • • • •	ʒj ad ʒij
Croci stigmata	• • • • •	gr. x ad ʒj
Cubeba	• • • • •	ʒj ad ʒij
Cumini semina	• • • • •	ʒj ad ʒj
Caprum ammoniatum	• • • • •	gr. $\frac{1}{4}$ ad gr. v
Cupri sulphas	• • • • •	gr. $\frac{1}{4}$ ad gr. $1\frac{1}{2}$
— acetas. D.	• • • • •	gr. $\frac{1}{4}$ ad gr. ij
Curcumæ longæ radix. D.	• • • • •	ʒss ad ʒij
Cuspariæ cortex	• • • • •	gr. vj ad ʒj
Cydoniæ semina, see the Decoct.		
Daturæ stramonii herba et semina	• • • • •	gr. i ad gr. viij
Dauci semina	• • • • •	ʒj ad ʒj
Decoctum aloes comp.	• • • • •	f. ʒss ad f. ʒij
— althææ officinalis, f. ad libitum.		
— cinchonæ	• • • • •	f. ʒj ad f. ʒiv
— cydoniæ	• • • • •	f. ʒj ad f. ʒiv
— daphnes mezerei	• • • • •	f. ʒij ad f. ʒvj
— dulcamaræ	• • • • •	f. ʒss ad f. ʒij
— hordei	• • • • •	f. ʒiv ad ʒss
— geoffrææ inermis	• • • • •	f. ʒss ad f. ʒij
— hordei comp.	• • • • •	f. ʒiv ad ʒss
— glycyrrhizæ, ad libitum.		
— guaiaci comp.	• • • • •	f. ʒij ad f. ʒvi
— lichenis	• • • • •	f. ʒj ad f. ʒiv
— hæmatoxyli	• • • • •	f. ʒj ad f. ʒij
— malvæ comp., used in clysters.		
— papaveris, used for anodyne fomentation.		
— pyrolæ. D.	• • • • •	f. ʒj ad f. ʒij
— quercus, used in injections.		
— sarsaparillæ	• • • • •	f. ʒiv ad ʒss
— comp.	• • • • •	f. ʒiv ad ʒss
— sennæ	• • • • •	f. ʒss ad f. ʒij
— senegæ	• • • • •	f. ʒss ad f. ʒij
— taraxici	• • • • •	f. ʒj ad f. ʒij
— ulmi	• • • • •	f. ʒiv ad ʒss
— veratri, applied externally.		
Digitalis foliæ et semina	• • • • •	gr. ss ad gr. ij
Diosmæ crenatæ, see Decoct. Buchu.		
Dolichi pubes	• • • • •	gr. v ad gr. x
Dulcamaræ cauliss, see Decoct.		

Elaterii pcpones, see Extract.

Electuarium catechu comp. ʒj ad ʒj

Euphorbiæ gummi resinæ, used externally.

Extractum aconiti gr. i ad gr. v

———— aloes purif. gr. v. ad gr. xv

———— artemisiæ absinthii gr. x ad ʒj

———— anthemidis gr. x ad ʒj

———— belladonnæ gr. i ad gr. v

———— cinchonæ gr. x ad ʒss

———— resinosum gr. x ad ʒss

———— colcynthidis gr. v ad ʒss

———— comp. gr. v ad ʒss

———— conii gr. v ad ʒj

———— elaterii gr. ½ ad gr. ij

———— gentianæ gr. x ad ʒss

———— glycyrrhizæ, ad libitum.

———— hæmatoxyli gr. x ad ʒss

———— radicis hellebori nigri gr. x ad ʒj

———— humuli gr. v ad ʒj

———— hyoscyami gr. v ad ʒj

———— jalapæ gr. x ad ʒj

———— lactucæ gr. x ad ʒj

———— nucis vomicæ gr. ¼ ad gr. ½

———— opii gr. ½ ad gr. v

———— papaveris gr. ij ad ʒj

———— rhei gr. x ad ʒss

———— sarsaparillæ gr. x ad ʒj

———— sarsaparillæ fluidum f. ʒij ad f. ʒiv

———— rutæ graveolentis gr. x ad ʒj

———— spartii scoparii ʒss ad ʒj

———— stramonii gr. ¾ ad gr. ij

———— taraxaci gr. x ad ʒij

Emulsio acaciæ Arabicæ, ad libitum

———— camphoræ. E. f. ʒss ad f. ʒij

Ferrum gr. x ad ʒss

Ferri acet. D. gr. iv ad gr. xij

———— ammoniatum gr. x ad gr. xv

———— oxydum nigrum. D. gr. v ad ʒj

———— subcarbonas gr. iij ad ʒj

———— sulphas gr. j ad gr. v

———— rubigo gr. v ad ʒss

———— tartarizatum gr. x ad ʒss

Filicis radix ʒj ad ʒss

Fœniculi semina ʒj ad ʒj

Galbani gummi resina	.	.	gr. x ad 3ss
Gallæ	.	.	gr. x ad 3j
Gentianæ radix	.	.	gr. x ad 3j
Geoffrææ inermis cortex	.	.	3j ad 3j
Geum urbanum radix	.	.	3ss ad 3j
Glycyrrhizæ radix	.	.	3ss ad 3j
Granati cortex	.	.	3j ad 3j
Gratiolæ officinalis herba	.	.	gr. x
Guaiaci resinæ	.	.	gr. x ad 3ss
———— lignum, see Decoct.			

Hæmatoxyli lignum, see Decoct.

Helenium	.	.	f. 3ss ad 3j
Hellebori foetidi folia	.	.	gr. x ad 3ss
———— nigri radix	.	.	gr. x ad 3j
Hordei semina, see Decoct.			
Humuli strobuli	.	.	gr. x ad 3ss
Hydrargyri nitricæ oxydum, applied externally.			
———— oxydum einereum	.	.	gr. j ad iiij
———— nigrum. D.	.	.	gr. viij ad 3j
———— rubrum	.	.	gr. $\frac{1}{8}$ ad gr. j
———— oxymurias	.	.	gr. $\frac{1}{8}$ ad $\frac{1}{2}$
———— submurias	.	.	gr. v. ad gr. xv
———— sulphuretum rubrum	.	.	gr. x ad 3ss
———— nigrum	.	.	gr. v ad 3ss
———— cum cretæ	.	.	gr. x ad 3ss
———— præcipitatum album, used externally.			
———— purificatum	.	.	3ss ad 3j
Hydriodas potassæ. D.	.	.	gr. j ad gr. iiij
Hydrosulphuretum ammoniæ	.	.	℥ v ad ℥ xv
Hyoscyami folia et semina	.	.	gr. iiij ad gr. x
Hyssopus officinalis herba. E.	.	.	3j ad 3j

Ilicina	.	.	gr. vj ad xxiv
Infusum anthemidis			
———— armoraciæ comp.			
———— aurantii comp.			
———— calumbæ			
———— caryophyllorum			
———— cascarillæ			
———— catechu comp.			
———— cinchonæ			
———— euspariæ			
———— digitalis	.	.	f. 3ss ad 3iss
———— gentianæ comp.	.	.	f. 3j ad 3iij

Infusum lini comp., ad libitum			
— quassiæ	}		
— rhei			
— rosæ comp.			
— sennæ comp.			f. ʒij ad ʒiv
— semaroubæ			f. ʒij ad ʒiv
— valerianæ. D.			f. ʒjss ad ʒij
Iodinium, or iodina			gr. $\frac{1}{6}$ ad gr. iv
Ipecacuanhæ radix		{	gr. $\frac{1}{2}$ ad gr. iss
			emetic gr. x ad ʒss
Jalapæ radix			gr. x ad ʒss
Juniperi baccæ et cacumina			ʒss ad ʒj
Kino			gr. x ad ʒss
Krameriæ radix			ʒj ad ʒij
Lauri cassiæ cortex			gr. v ad ʒj
— baccæ et foliæ			gr. x ad ʒss
Lavandulæ flores			ʒj ad ʒj
Lichen			ʒj ad ʒj
Limonum cortex			
Linum catharticum			ʒss ad ʒj
Liquor ammoniæ		{	m x ad m xx
			diluted
— acetatis			f. ʒij ad f. ʒj
— subcarb.			f. ʒss ad f. ʒj
— arsenicalis			m iij ad m xij
— calcis			f. ʒiss ad f. Oss
— muriatis		{	f. ʒss ad f. ʒj
			diluted
— ferri alkalini			f. ʒss ad f. ʒj
— hydrargyri oxymuriatis			f. ʒj ad ʒij
— opii sedativus			m xv add ʒss
— potassæ			m x ad ʒss
— subcarb.			m x ad ʒss
— tartari emetici		{	m ij ad ʒj
			as a diaphoretic.
			ʒss ad ʒij
Lobeliæ tinctura			as an emetic.
			ʒss ad ʒij
Magnesia			ʒss ad ʒj
— subcarb.			ʒss ad ʒij
— sulphas			ʒii ad ʒiss
Malva, see Decoction.			

Manna	3ss ad 3ij
Marrubium	3ss ad 3ij
Mastiche	gr. x ad 3ss
Mel boraeis, used in apthous affections of the mouth.	
— despumatum	3ij ad 3ij
— rosæ, used in gargles.	
Mentha piperita	gr. x ad 3j
— viridis	gr. x ad 3j
Menyanthes	3iss ad 3ij
Mezerei cortex, used in making decoct. sarsaparell. c.	
Mist. ammoniaci	f. 3iv ad f. 3i
— amygdalarum	f. 3ij ad f. 3iv
— asafoetidæ	f. 3ss ad f. 3iss
— camphoræ	f. 3ss ad f. 3iss
— cretæ	f. 3j ad f. 3ij
— ferri comp.	f. 3j ad f. 3ij
— guaiaci	f. 3ss ad f. 3ij
— moschi	f. 3ss ad f. 3ij
Morphia	gr. $\frac{1}{8}$ —ij
Moschus	gr. v ad 3j
Mucilago acaciæ	f. 3j ad 3jss
— amyli, used for clysters.	
Myristicæ nuclei	gr. v ad 3j
Myrrha	gr. x ad 3j
Oleum amygdalarum	f. 3ij ad f. 3j
— anisi	℥ v ad ℥ x
— anthemidis	℥ v ad ℥ x
— carui	℥ i ad ℥ v
— fœniculi dulcis. D.	℥ x ad ℥ xx
— juniperi	℥ ij ad ℥ x
— lavendulæ	℥ i ad ℥ v
— lini	f. 3ij ad f. 3iv
— volatile lauri sassafras. E.	℥ ij ad ℥ x
— menthæ piperitæ	℥ i ad ℥ ij
— — viridis	℥ ij ad ℥ v
— origani	℥ i ad ℥ ij
— pimentæ	℥ ij ad ℥ v
— pulegii	℥ j ad ℥ vi
— ricini	f. 3ss ad f. 3j
— rosmarini	℥ ij ad ℥ v
— succini	℥ x ad 3ss
— sulphuratum	℥ x ad 3ss
— terebinthinæ reet.	℥ f. x ad 3j
Olibanum	gr. x ad 3ss
Olivæ oleum	f. 3ij ad 3v

Opium	.	.	.	.	gr. $\frac{1}{2}$ ad gr. iv
Opopanax G. R.	.	.	.	.	gr. x ad 3ss
Origanum	.	.	.	.	℥j ad 3j
Oxymel simplex	.	.	.	.	f. 3j ad f. 3j
— scillæ	.	.	.	.	f. 3ss ad 3ij
— colchici. D.	.	.	.	.	f. 3j ad f. 3j
Petroleum	.	.	.	.	gr. x ad 3ss
Pilulæ aloes comp.	.	.	.	.	gr. x ad ℥j
— cum myrrha	.	.	.	.	gr. x ad ℥j
— et asafœtidæ. E.	.	.	.	.	gr. x
— asafœtidæ comp. E.	.	.	.	.	gr. x ad ℥j
— colocynthidis comp. D.	.	.	.	.	gr. viij ad ℥j
— galbani comp.	.	.	.	.	gr. x ad ℥j
Pilulæ cambogiæ comp.	.	.	.	.	gr. x ad ℥j
— ferri comp.	.	.	.	.	gr. x ad ℥j
— hydrargyri	.	.	.	.	gr. v ad gr. x
— submuriatis	}	.	.	.	gr. v ad gr. x
— compositæ	}	.	.	.	
— rhei comp. E.	.	.	.	.	gr. x ad ℥j
— saponis cum opio	.	.	.	.	gr. iij ad gr. x
— E. styrace. D.	.	.	.	.	gr. iij ad gr. x
— scillæ comp.	.	.	.	.	gr. x ad ℥j
Pimentæ baccae	.	.	.	.	gr. v ad ℥j
Piperina, in pills only	.	.	.	.	gr. v—x
Piperis longi fructus	.	.	.	.	gr. v ad ℥j
— nigri baccae	.	.	.	.	gr. v ad ℥j
— confectio	.	.	.	.	gr. v ad 3j
Pix abietina, used externally.					
— liquida, used externally.					
Plumbi subcarbonas, used externally.					
— acetas	.	.	.	.	gr. ss ad gr. ij
Porri radix	.	.	.	.	f. 3j ad f. 3ss
Potassa fusa	}	.	.	.	escharotics.
— cum calce	}	.	.	.	
— acetas	.	.	.	.	℥j ad ℥j
— carbonas	.	.	.	.	gr. x ad 3ss
— nitras	.	.	.	.	gr. x ad 3ss
— subcarbonas	.	.	.	.	gr. x ad 3ss
— sulphas	.	.	.	.	3j ad 3ss
— sulphuretum	.	.	.	.	gr. v ad gr. xv
— supersulphas	.	.	.	.	3ss ad 3ij
— supertartras	.	.	.	.	3j ad 3j
— tartras	.	.	.	.	3j ad 3j
Pterocarpî lignum, used for colouring tinctures.					

Pulegium	gr. x ad 5j
Pulvis aloes comp.	gr. x ad ʒj
——— antimonialis	gr. v ad gr x
——— cinnamomi comp.	gr. v ad gr. x
——— contrajervæ comp.	gr. xv ad ʒij
——— cornu usti cum opio	gr. v ad gr x
——— cretæ comp.	3ss ad 3j
——— cum opio	ʒj ad ʒij
——— ipccacuanha comp.	gr. v ad ʒj
——— kino comp.	gr. v ad ʒj
——— scammonæ comp.	ʒj ad 3j
——— scnnæ comp.	ʒj ad 3j
——— tragacanthæ comp.	gr. x ad 5j
Pyrethri radix	gr. iij ad gr. x
Quassia lignum	gr. v ad 3ss
Quercus cortex	gr. x ad 3ss
Rhamni baccæ, see Syrup.	
Rhei radix	gr. x ad 3ss
Rhæados petala, see Syrup.	
Rosæ caninæ pulpa, see Confectio.	
——— centifoliæ petala, see Syrup.	
——— gallicæ petala, see Syrup.	
Rosmarini cacumina	gr. x ad 3ss
Rubia radix	3ss ad 3j
Rutæ folia	gr. xv ad ʒij
Sabinae folia	gr. v ad gr. x
Sagapenum	gr. x ad 3ss
Salacina	gr. ij—xxx
Salicis cortex	gr. x ad 3j
Sambuci flores, in fomentations.	
Sapo durus	gr. v ad 3ss
Sarsaparillæ radix	ʒj ad 3j
Sassafras lignum et radix	ʒj ad 3j
Scammonæ gummi resinæ	gr. v ad gr. xv
Scillæ radix	gr. v ad 3ss
Sccale cornutum	ʒj—3iss
Scnegæ radix	ʒj ad ʒij
Scnnæ folia	ʒj ad 3j
Serpentariæ radix	gr. x ad 3ss
Simaroubæ cortex	gr. x ad 3ss
Sinapis semina	3j ad 3ss
Sodæ acetas. D.	3j ad 3iv

Sodæ carbonas	.	.	.	gr. x ad 3ss
— subcarbonas	.	.	.	gr. x ad 3ss
— — — — — exsiccata	.	.	.	gr. v ad gr. xv
— subboras	.	.	.	gr. x ad 3ss
— murias, used in lotions.				
— sulphas	.	.	.	3j ad 3j
— tartarizata	.	.	.	3ij ad 3jss
Solutio muriatis barytæ. E. D.	.	.	.	℥ v ad ℥ x
— — — — — calcis. E.	.	.	.	℥ xxx ad 3j
Spartii cacumina	.	.	.	3j ad 3j
Spigeliæ radix	.	.	.	gr. x ad 3j
Spiritus ætheris aromaticus	.	.	.	f.3ss ad f.3j
— — — — — nitrici	.	.	.	f.3ss ad 3j
— — — — — sulphurici	.	.	.	f.5ss ad f.3j
— — — — — comp.	.	.	.	f.3ss ad 3j
— — — — — ammoniæ	.	.	.	f.3ss ad f.3j
— — — — — aromaticus	.	.	.	f.3ss ad 3j
— — — — — fœtidus	.	.	.	f.3ss ad f.3j
— — — — — succinatus	.	.	.	℥ x ad f.3j
— — — — — anisi	.	.	.	f.3ij ad 3ss
— — — — — armoraciæ comp.	.	.	.	f.3ij ad 3j
— — — — — camphoræ, used externally.				
— — — — — carui	.	.	.	3ij ad 3j
— — — — — cinnamomi	.	.	.	f.3ij ad f.3j
— — — — — colchici ammoniatus	.	.	.	f.3ss ad 3j
— — — — — juniperi comp.	.	.	.	f.3ij ad 3j
— — — — — lavendulæ, used to make the spt. lavend. comp. and liniment. camph. comp.				
— — — — — comp.	.	.	.	f.3ss ad f.3ij
— — — — — menthæ pip.	.	.	.	f.3j ad 3j
— — — — — viridis	.	.	.	f.3j ad f.3j
— — — — — myristicæ	.	.	.	f.3j ad 3j
— — — — — pimentæ	.	.	.	f.3j ad f.3j
— — — — — pulegii	.	.	.	f.3j ad 3j
— — — — — rectificatus, used for making tinctures.				
— — — — — tenuior, equal parts of rectified spirit and water.				
— — — — — rosmarini, stimulant externally.				
Spongia usta	.	.	.	3j ad 3ij
Stannum	.	.	.	3j ad 3ss
Staphisagriæ semina	.	.	.	gr. ij ad gr. x
Stramonii folia et semina	.	.	.	gr. j ad gr. vi
Strychnia	.	.	.	gr. 1/8 ad 3ij
Strychnos, nux vomica	.	.	.	gr. ij ad gr. xv
Styracis balsamum	.	.	.	gr. x ad 3ss
Succinum	.	.	.	3j ad 3j

Sulphur lotum	3ss ad 3ij
— præcipitatum	3ss ad 3ij
Syrupus simplex, ad libitum.	
— acidi acetosi	f. 3j ad f. 3ij
— althææ	f. 3j ad f. 3iij
— aurantiorum	f. 3j ad f. 3ij
— colehici autumnalis	f. 3j ad f. 3ss
— croci	f. 3j ad f. 3ij
— dianthi caryophylli	f. 3j ad f. 3ij
— limonum	f. 3j ad f. 3iij
— mori	f. 3j ad 3iij
— papaveris	f. 3j ad f. 3ij
— rhæados, used for colouring	
— rhamni	f. 3iv ad f. 3ij
— rosæ	f. 3ij f. 3j
— sarsaparillæ, used with the decoct.	
— scnuæ	f. 3ij ad f. 3ss
— toltanus	f. 3j ad f. 3iij
— zingiberis	f. 3j ad f. 3iij
Tabaci folia, sec Infusum tabaci.	
Tamarindi pulpa	3ss ad 3jss
Taraxici radix, juicc	3ss ad 3jss
Terebinthina Canadensis	3j ad 3j
— Chia	3j ad 3j
— vulgaris, externally.	
Testæ	3ss ad 3jss
Tiglii crotonis oleum	gtt. j ad gtt. iij
Tinctura ferri acetatis	℥ x ad f. 3j
— aloes	f. 3ss ad f. 3jss
— ætherea. E.	f. 3j ad 3ij
— comp.	f. 3j ad 3iij
— Angusturæ	f. 3j ad f. 3ij
— asafoetidæ	f. 3ss ad f. 3iss
— aurantii	f. 3ij ad f. 3iij
— benzoini comp.	f. 3ss ad f. 3jss
— buchu. D.	f. 3j ad f. 3iv
— calumbæ	f. 3j ad f. 3iij
— camphoræ comp.	f. 3j ad f. 3iij
— cantharidis	℥ xv ad f. 3j
— capsici	f. 3ss ad f. 3ij
— cardamomi	f. 3j ad f. 3ij
— comp.	f. 3j ad f. 3ss
— cascarillæ	f. 3j ad f. 3ss
— castorei	f. 3j ad 3ij

Tinctura castorei comp.	f.3j ad 5iv
catechu	f.3j ad f.3iij
cinchonæ	f.3 ad f.3iij
ammoniata	f.3ss ad f.3ij
comp.	f.3j ad f.3iij
cinnamomi	f.3j ad f.3iij
comp.	f.3j ad f.3iij
seminum colchici	℥ x ad f.3ss
croci sativi	f.3j ad f.3iij
digitalis	℥ x ad ℥ xl
ferri ammoniati	℥ xx ad f.5j
muriatis	℥ x ad ℥ xx
galbani. D.	f.3j ad f.3iij
gallarum. E. D.	f.3j ad 3iij
gentianæ comp.	f.3j ad f.3iij
guaiaci	f.3j ad f.3ij
ammoniata	f.3j ad f.3iij
hellebori nigri	f.3ss ad 5j
humuli	f.3ss ad f.3iij
hyosциami	℥ xv ad f.3ij
jalapæ	f.3j ad f.3ss
iodinii. D. vel iodinæ	℥ x ad ℥ xx
kino	f.3j ad f.3ij
moschi. D.	f.3j ad f.3jss
myrrhæ	f.3ss ad f.3j
nucis vomicæ. D.	℥ v ad ℥ xx
opii	℥ x ad f.3j
ammoniata. E.	f.3ss ad f.3ij
piperis cubebæ. D.	℥ x ad f.5j
quassia. E. D.	f.3j ad f.3ij
rhei	f.3ij ad f.3jss
et gentianæ. E.	f.3j ad f.3ij
scillæ	℥ xv ad f.5j
sennæ	f.3ss ad 3j
serpentariz	f.3j ad f.3iij
toluiferæ balsami	f.3ss ad 5ij
valerianæ	f.3ij ad f.3ss
ammoniata	f.3j ad f.3ij
veratri albi	℥ v ad ℥ x
zingiberis	f.5j ad f.3iij
Tormentillæ radix	ʒj ad ʒij
Toxicodendri folia	gr. j ad gr. x
Tragacantha	gr. x ad 5j
Tussilago	5iv ad Oss

Ulmī cortex, see Decoct.

Unguentum hydrargyr. mitius 3j

Uvæ passæ, ad libitum.

— ursi folia gr. x ad ʒij

Valerianæ radix ʒj ad 3j

Veratri radix gr. ij ad gr. v

Vinum aloes f. ʒiv f. ʒjss

— antimonii tart. f. ʒss ad f. ʒjss

— colchici ℥ xxx ad f. ʒj

— gentianæ comp. E. ʒij ad f. ʒvj

— ferri f. ʒj f. ʒiv

— ipecacuanhæ ℥ xv ad f. ʒj

— nicotianæ tabaci. E. ℥ x ad ℥ xxxvi

— opii ℥ x ad f. ʒj

— rhei palmati. E. f. ʒiv ad f. ʒss

— veratri f. ʒss ad f. ʒij

Violæ odoratæ flores ʒj ad ʒij

Zinci oxydum gr. j ad gr. vi

— sulphas gr. i ad gr. ij

Zingiberis radix gr. v ad ʒj

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THE END.

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